

**Impact of Built Environment for Improving
Psychology & Behavioural Aspects of Prisoners**

A DISSERTATION

**Submitted in Fulfillment
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Impact of Built Environment for Improving Psychology & Behavioural Aspects of Prisoners

Introduction

A prison in its general sense, is a place where a person who is convicted of an offence and have been awarded punishment of imprisonment for a specific time period is kept. Earlier, the concept of prison was confined to the enclosed walls wherein the convicted person was kept with an intention to keep him away from social life and luxuries and repent for the wrong done by him. But later on, after a long time, the society and the authorities in power were able to understand that even the prisoners should enjoy the dignified life.



Earlier the society and the government towards the prisoners were little insensitive towards the human rights of the prisoners. However, the fact was later on realized that a society is deemed to be civilized one and a well organized one in accordance with the law only when the individuals are given due recognition to their fundamental rights, no matter if he is a normal citizen or a person convicted of an offence and confined behind the prison bars



Open prison refer to the prisons that involve minimum security and is mainly dependent on the self discipline of the inmates. The rules of the other prisons are less harsh as compared to the rules of the other prisons. For this reason they are also known as open air camps, prisons without bars or minimum security prisons. These promote one of the major principles of punishment known as the 'Reformative Theory' where instead of severely punishing the convict, an opportunity is provided to reform oneself and get into the mainstream of life.



Sometimes, people commit serious crimes out of short lived anger. When these people remain in prison for a long duration, they become inclined to revolt against the social system, develop negative feelings. To shield them from these negative feelings and ensure their social integration, this experiment open jails is the best option.



When these prisoners will walk out of the open jail, they will be better equipped to accept the society and the society too will have a better understanding about them.

Rajasthan which has as many as 29 open prisons, the highest in the country in its Rajasthan Prisons Open Air Camp Rules.

Types of jail

Central jail

The criteria for a jail to be categorized as a central jail varies from state to state. The common features observed throughout India is that prisoners sentenced to imprisonment for a long period (more than 7 years) are confined in the Central jails. These jails also have rehabilitation.



District Jail

District jails serve as the main prisons in states and union territories where there are no Central Jails. The prisoners sentenced to imprisonment for a period (less than 7 years) are confined in the district jails.



Sub jails

Sub jails are similar institutions situated at a sub - divisional level in the states. Ten states have reported comparatively higher no. of sub jails revealing a well organized prison setup even at lower formation.



Open Jail

Open jail are minimum security prisons. Only convicted prisoners with good behaviors satisfying certain norms prescribed in the prison rules are admitted in open jails. Minimum security is kept in such prisons and prisoners are engaged in agricultural activities.



Concept and Working of Open Jail

In India, the concept of Open prison system can be traced back in 1836 when first all India Jail committee was set up. However, the results were not satisfactory and a number of committees were appointed since them, the important one being All India Committee on Jail Reforms 1956. the most significant committee which played a major role in the development of open prison system in India was the Mulla Committee.



The idea is to help a prisoner to re- socialize with the outside world and rehabilitate and reform himself so as to be ready to absorb the environment of outside world once his term of imprisonment is over.



However, a prisoner who has been sentenced to life imprisonment could also be sent to open prison depending upon the fulfillment of certain rules or conditions. The open jails in India involve the activities such as farming and animal husbandry.

The prisoners who have completed a substantial amount of the punishment in closed prison and who has shown a good behavior throughout that duration are eligible to be sent to the open prisons. Prisoners with good behavior satisfying certain norms prescribes in the prison rules are admitted in open prisons. Minimum security is kept in such prisons and prisoners are engaged in agricultural activities. They are also allowed to work or study according to their interest.



Seventeen states have functioning open jails in their jurisdiction. Rajasthan reported the highest number of 29 open jails. There are no open jails in any of the union territories at the end of 2015.



Need of Open Jail

Indian Jails are so crowded that there are 600% more inmates than actual capacity and the prisons are crammed with prisoners. Majority of the existing jails have more no. of prisoners in their premises than the no. that actually is planned. Neither there is proper facilities provided nor there is enough staff to supervise the area or the overcrowding.



As per the survey reports the crime rate of Uttar Pradesh is more then the rest. The prisoners sent to a particular jail develop a certain mind set and also they psychologically accept the way and continue to do the same activities even being in prison or not.



So with open jail the society can be benefitted in a way that a person with less criminal records can be sent there and apprises with new opportunities and taught the social values so that there can be chance of reformation in their behavior

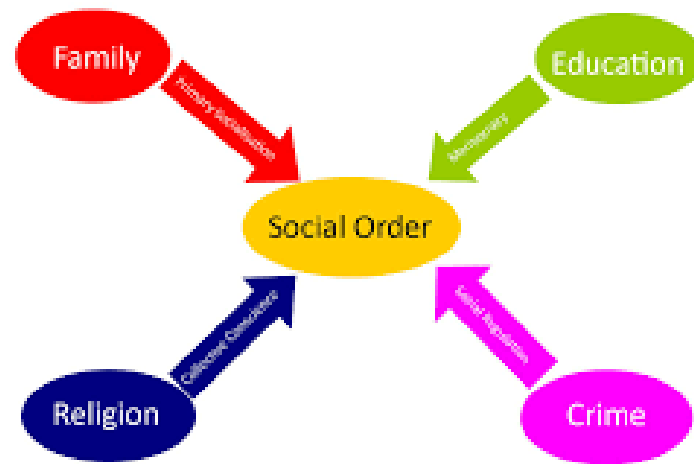
Scope of the Project

Fair chance for the prisoners to redeems themselves. It will ensure that the principle is respected; the human rights of inmates are protected.

When the income generating member of the family is imprisoned, open jail may provide some kind of employment so that the prisoners even after being in jail can serve the family. The idea is to help the prisoner to re-socialize with the outside world and rehabilitate and reform himself so as to be ready to absorb the environment



Our society is regulated by three institutions for maintainig social order :



The criminals are given punishment for the wrong act they did in the society. The prisoners were treated as a galley slave. They were even kept in dungeons. They were given physical torture as revenge. The criminals in this way get mentally tortured also. It was assumed that these persons are not human beings and does not deserve any sort of humane behavior.

The scenario has entirely changed now. Even the name of jail department is changed to “PRISON ADMINSTRATION AND REFORM SERVICES.” Jail today has not remain only for the punishment, confinement and bad behavior towards criminals but it must also work for the reformation of the prisoners.

As one day the prisoners will come out from the jails and shall once again be the part of the society, it is essential to pass these criminals through the process of rehabilitation programs within the jails so that these may be prepared for a successful re-entry into the society.

There are so many psychological barriers emerged in a prisoner because of so many problems of prisoners, problems of staff, problems of prisoner-staff relationship which are treated through the better understanding of such problems and solving it by providing better facilities:-

The negative impacts of architectural elements:-

Boundary wall

- High/ crude/ massive / monotonous boundary/ partition wall – **hard architecture**

Dim light in cells even on bright day

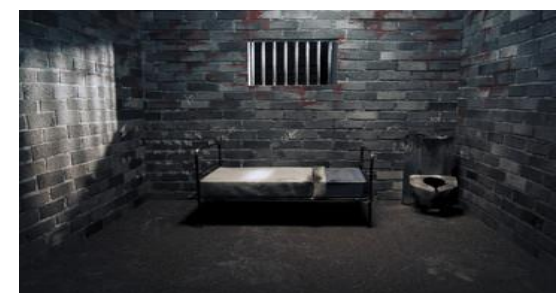
Very low light in the cells even in the sunny day time because of very narrow ventilators and door closed with MS sheet



Barren land of campus without green grass and colorful flowers



Building materials which are decayed very soon



Uncolorful visions of building exteriors and interiors

The negative impacts of architectural elements:-

- There are so many things which can be dealt through architectural design to make the prisoners positive in their attitude for rehabilitation purposes. An architect can also design activities to be performed by prisoners (by adding suggestion to the activity already suggested by the reformer committee, administration, central and state government).



Kitchen Unmanaged Planning

- Provision of crude and unhygienic system in kitchen



Hospitals

- Inadequate facilities in hospitals



Acoustical problems in mulakaat ghar



Bad drainage, water supply and sanitary condition.

Project Requirements

It is necessary to develop stress free environment to the prisoners to create a positive (cheerful) attitude towards life through finding out the psychological problems arises and there solutions through architectural design.

- Layout
- Shape of barracks / cells
- Control of excessive natural light
- Use of natural light in a proper way
- Use of colours
- Control of noise pollution i.e. acoustics
- Availability of natural environment (grass covered fields, ornamental and shady trees) to release fatigue.
- Treatment of harsh / massive / monotonous boundary walls (frescoes)
- Avoidance of overcrowded long / rectangular / monotonous barracks (small dormitories, privacy).
- Building materials which are not decayed soon give a pleasure to the user.
- Proper and hygienic design of kitchen, hospitals are also required.
- Attention has to be given on Drainage scheme, Water supply system and sewer facilities.
- Provision of spaces for recreational and work purposes is also necessary.

Eligibility criteria

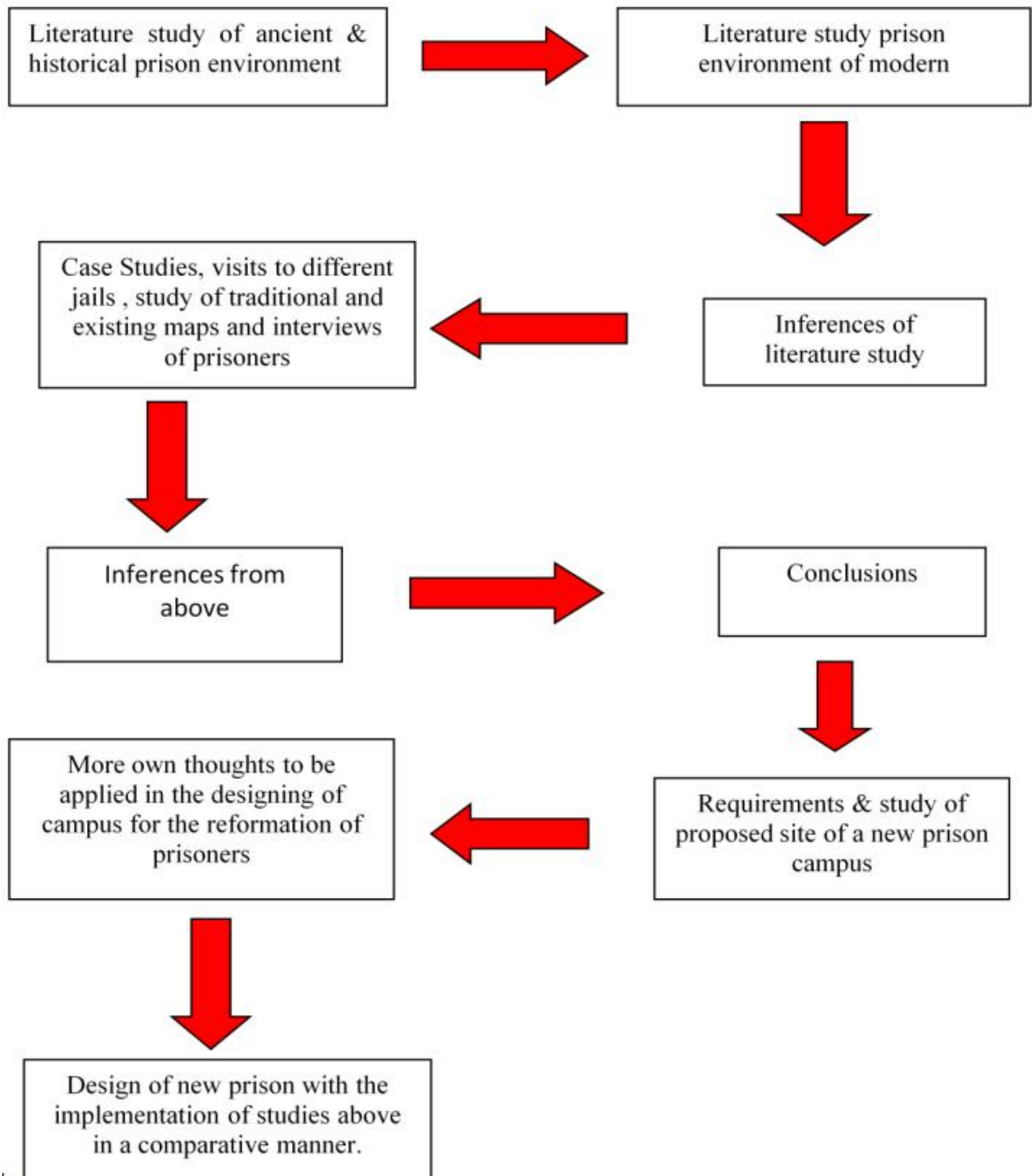
According to the policy draft convicts in terror cases and cases involving Heinous offences such as murder and rape, will not be eligible for transfer. These guidelines if approved will be applicable to all open institutions in the country. At present, eligibility criteria for open prisons vary in some states.

According to the national guidelines, which are under the final scrutiny of the Ministry of Home Affairs, the conduct of the prisoner will be crucial in deciding his/her fate. In order to get transferred to an open prison, an inmate must have spent five years in a closed jail and the eligibility for getting transferred to a semi-open prison would require an inmate to spend two years in a closed prison. These are not open for under trial prisoners. Even the life convicts who have showed good conduct can be transferred to semi- open or open prisons.

The negative impacts of architectural elements:-

	Particulars/Problems	Treatments
1	High/crude/massive/monotonous boundary/partition wall- hard architecture	Long boundary walls cannot be changed due to security reasons by can be treated aesthetically by prisoners itself. Some prisoners programmes/talent hunt can be organized inside the campus where they can showcase what
2	Linear/ long / monotonous barracks with the capacity of at least 30 prisoners.	The monotony can be broken by providing courtyards in the centre that would provide the feeling of ownness amongst the prisoners
3	Uncolorful visions of building exteriors and interiors.	Building façade could be changed from monotonous single shaded walls with windows to green walls or panelled exteriors.
4	Barren land of campus without greenery or plantation.	Barren lands could be better treated for the purpose of gardening or vegetation which could be used in kitchen and that way it can keep them occupied as well.
5	Dim light in cells even on bright days due to narrow ventilators and closed door with MS sheets.	Increasing the number of ventilators with mosquito nets inside the cells for increasing maximum daylight. Adding on a glass panel on ventilators to regulate air flow in winter season.
6	Building materials which are decayed very soon.	Quality of building materials to be improved while construction for strength and durability in the campus.
7	Unmanaged planning of kitchen	Providing separate spacing in the kitchen for tasks like cooking, cleaning, washing, storage etc to keep the space hygienic and organized.
8	Acoustical problems in Mulakaat Ghar	
9	Inadequate facilities in hospitals	Proper planning of hospital block with ample number of beds for the patients and efficient resources for doctors to treat all patients inhouse only.
10	Bad drainage, water supply and sanitary conditions.	Drainage system and sanitary conditions can be cured by proper planning to sewer and manholes that can be cleaned time to time.
11	Insufficient/no space for prisoner's belongings	Providing open shelves inside the barracks according to the capacity of the barracks
12	Stinky utensils inside the barracks for hours	Providing small sink area inside the barracks which would be useful at night for the prisoners to wash up their dirty utensils and assemble at a place rather keeping it dirty.
13	Inadequate prisoner's programmes	Despite the problems of overcrowding, manpower shortage and other administrative difficulties, innovative initiatives have been undertaken in some prisons. For e.g. the Art of Living has been carrying out a SMART programme in Tihar Jail. Such programmes are few and far between. Many prisons have vocational training activities, but these are often outdated. Hardly any of the prisons have well planned prison programmes providing structured daily activities, vocational training, pre-discharge guidance and post-prison monitoring.

METHODOLOGY



CASE STUDY 01

DR. SAMPURNANAND KHULA BANDI SHIVIR SANGANER, RAJASTHAN

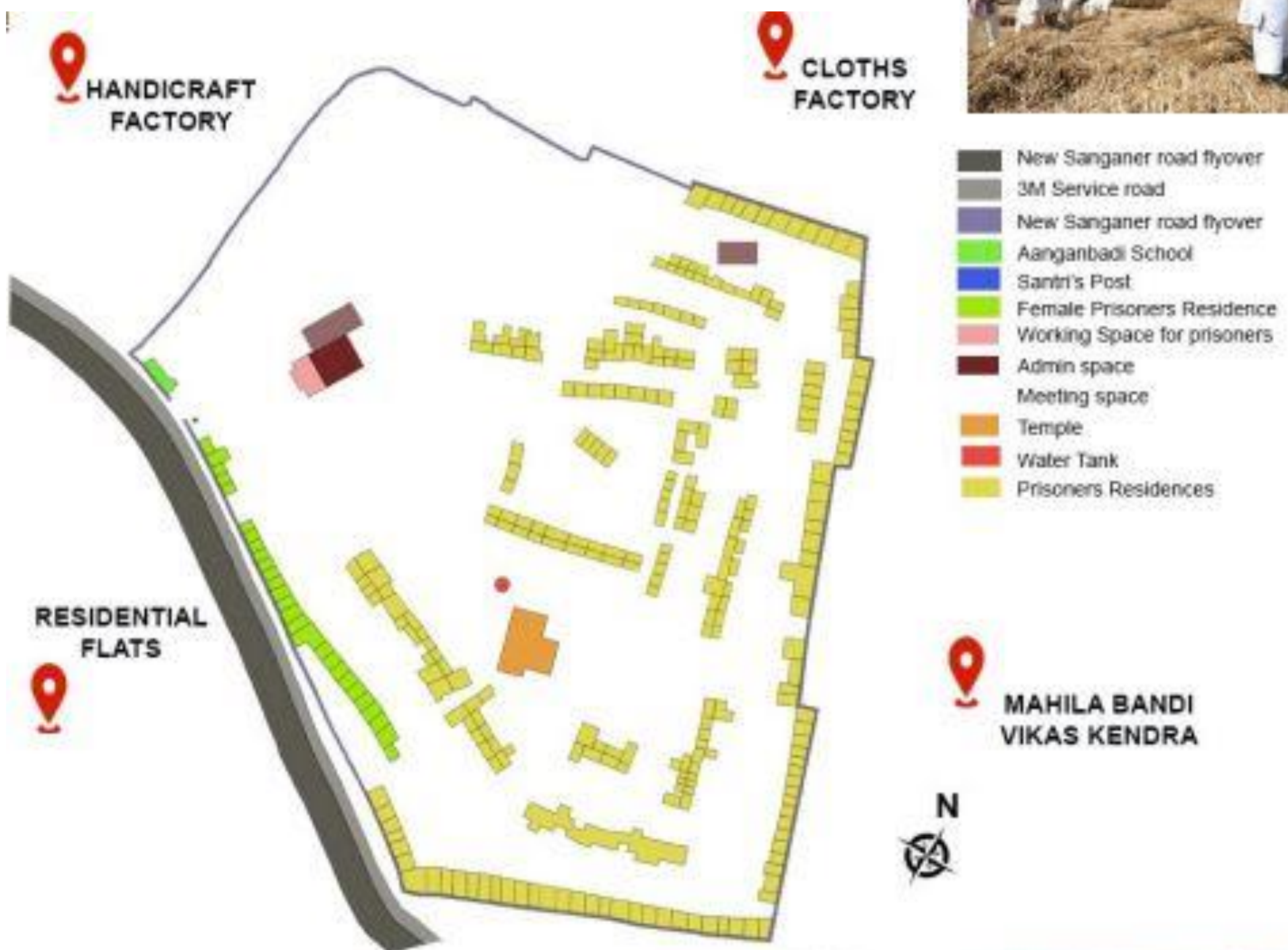
- **Location** : Dr. Sampurnanand Open Jail, Sanaganer Rajasthan
- **Address** : Tirupathi Balaji Nagar, Sanganer, Jaipur, Rajasthan
- **Total site area** : 14 acres
- **Client** : Rajasthan Prison Department

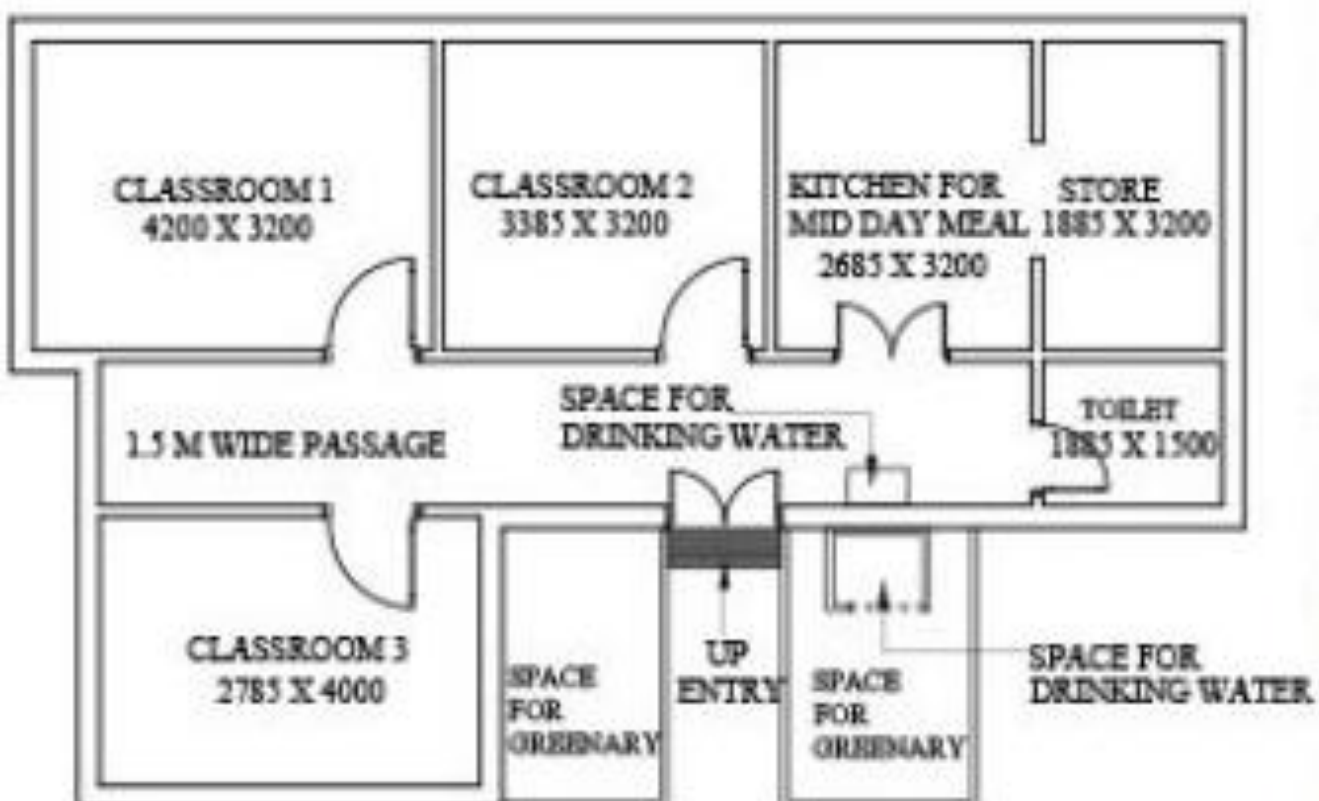
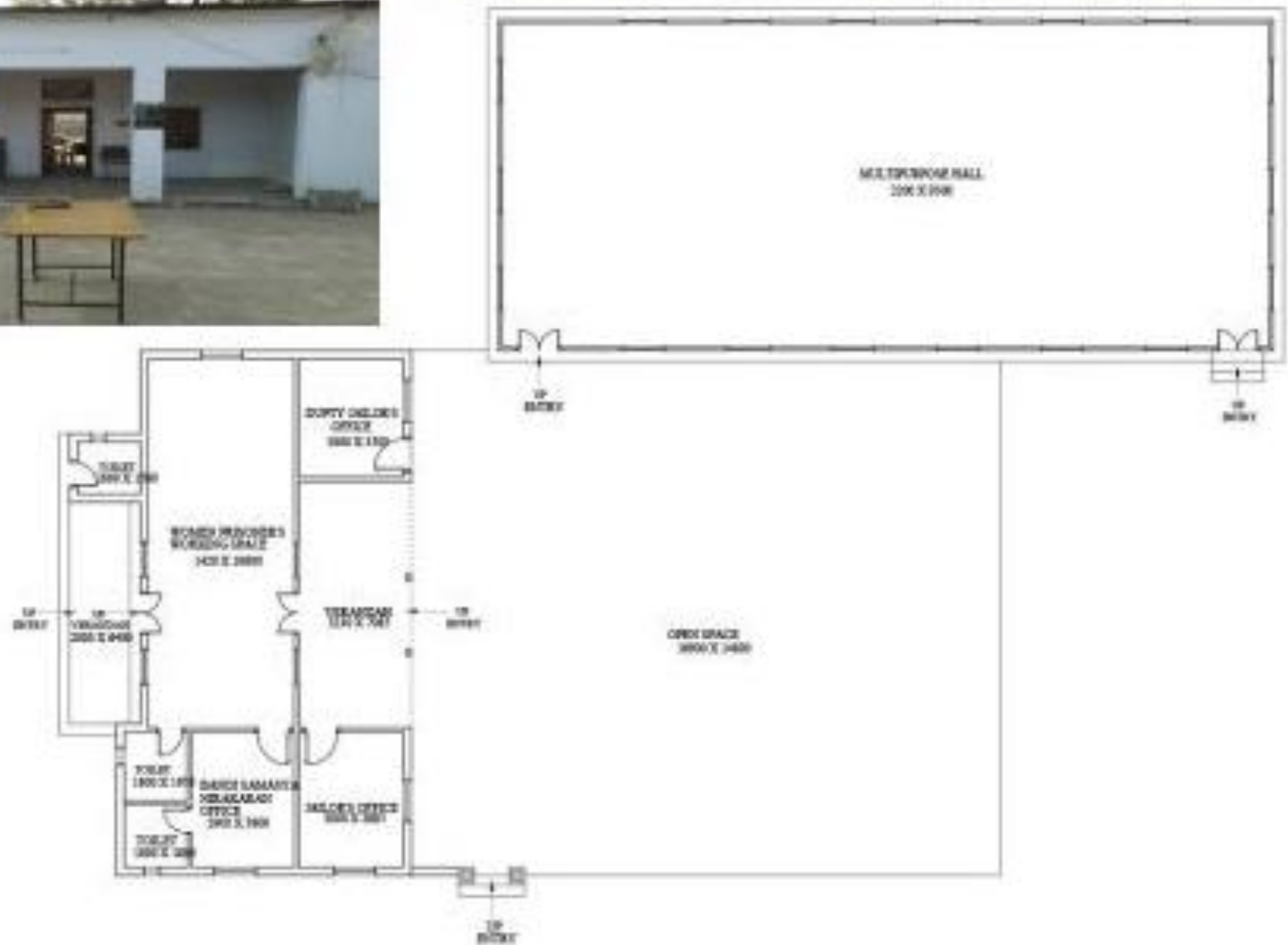
OVERVIEW

- This Sanganer open prison is like a small prisoners village situated in the heart of Sanganer city.
- It is surrounded by new construction, factories & malls. It is the largest prison in the Rajasthan housing nearly 400 prisoners along with their family.
- The prison is self governed by the “bandi panchayat” the 5 prisoners who are the member of the panchayat manage the administrative details of the prison. They conduct the two daily roll calls of the prisoners & maintain the attendance register. They collect electricity bills from the prisoners.

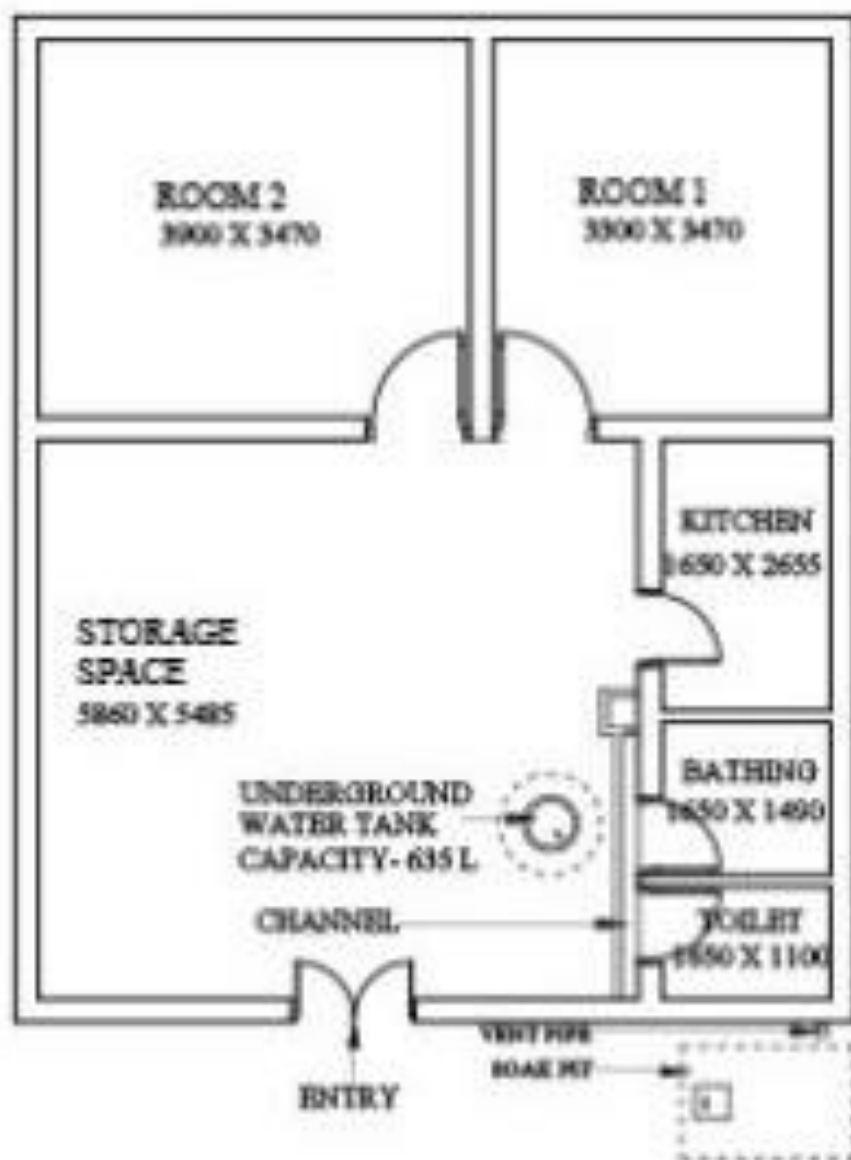
Near by transportation

- Land mark Jaipur international airport is 7 km away from the open air camp.
- Nearest bus stop: Sanganer bus station 1.6 km away from jail
- Nearest railway station Sanganer railway station - 2.2 km away
Durgapur railway station – 17 km away
- Air port Jaipur international airport- 7 km away





PRISONERS' RESIDENCE



CASE STUDY 02

Tihar Ashram

Tihar Ashram is one of the largest detention facilities in the world. Hence, it is bound to have faced every problem that a prison in India faces. But the Delhi Prisons Authority has continuously ensured an adequate living condition for all its prisoners by taking various reformatory steps. In this case study, we will review what these steps are and how they were implemented to make Tihar jail what it is today.

The total population of Tihar complex is 11800, when the capacity is only 6250.

-- There are only 2 jails for convicts.

-- All convict lodging buildings are only 1 storey high.

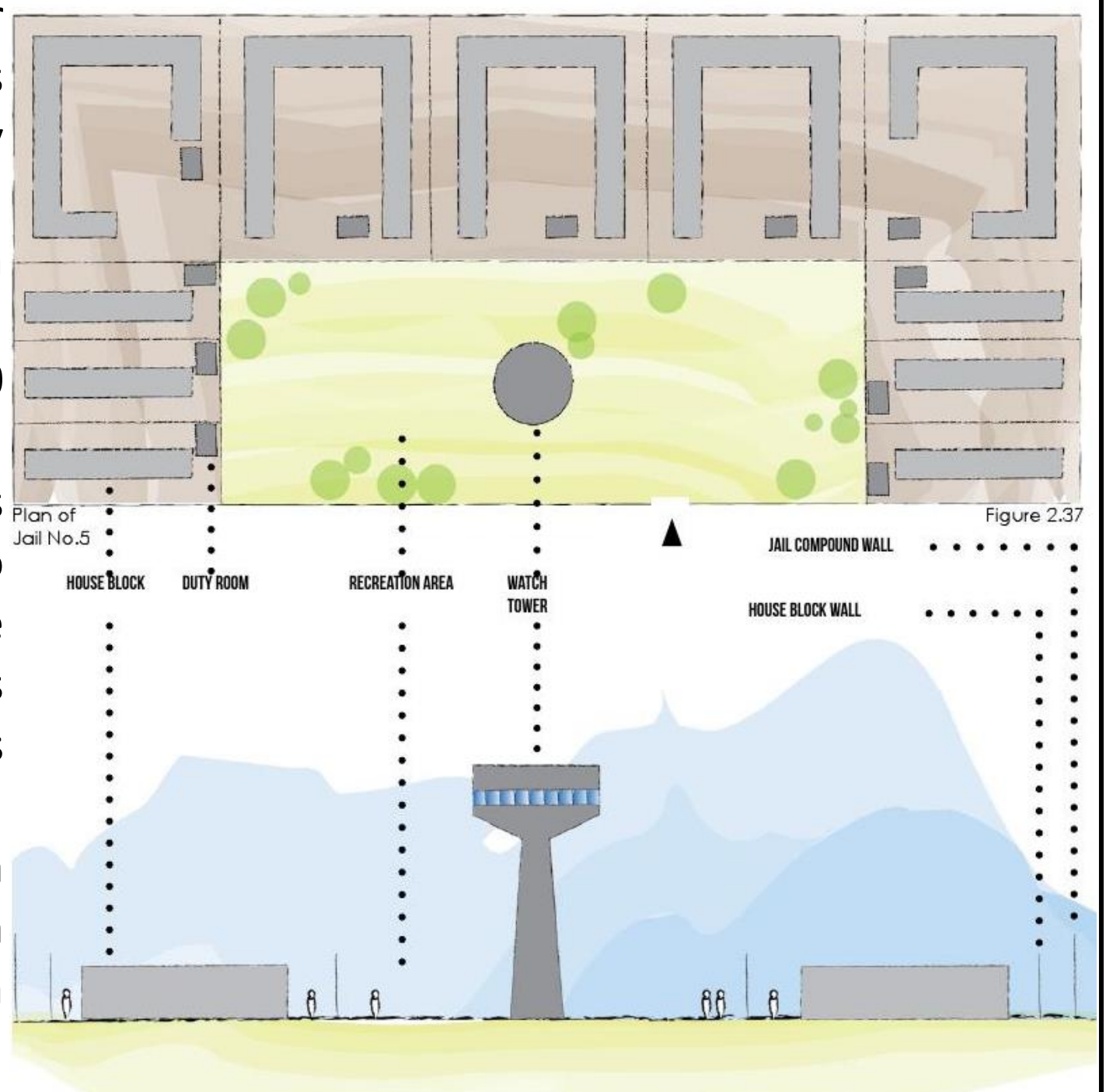
-- Tihar jail is a progressive jail and has its own brand.

There are various factories inside that employ the convicts in the manufacturing of various items.

In Delhi, there is a shift towards multi-storied prisons.

HOUSING

- Each ward or house block has the total capacity of 50 inmates.
- Each jail can inhouse approximately 400 inmates.
- Each complex is broken up into multiple house block walled areas each having its own security post.
- Each cells open out into an open space of each house block.



SECURITY

- Through the security, one then enters the recreation space.
- The watch tower in the centre is the structure which houses one staff.
- Watch towers are also present at the corners of the complex.
- There is only one secure entry point.



This jail, Central Jail No. 5, had a capacity to lodge 750 prisoners. In the year 2000, an exclusive women's jail, Central Jail No. 6, was commissioned with a capacity to lodge 400 female prisoners. Between 2003 and 2005, three Central Jails with a collective capacity of 1550 prisoners and one District Jail (at Rohini) with a capacity of 1050 prisoners were commissioned by the Delhi Prisons Authority.

At present, another jail under the Tihar Prisons Authority, known as the Mandoli Jail Complex, is being constructed. It has a tentative capacity to lodge as many as 3500 prisoners. The salient features of this Mandoli Jail Complex are:

- The complex will house 6 Jails one for convicts, one for first time offenders, one each for long term under trials, adolescent, women and High Security prisoners.
- Air Circulation System in all wards.
- No electrical fixtures inside the wards.
- Inbuilt mechanism for CCTV, Optical Fiber Cable Network.
- Dual water supply system, Solar Heating System, R.O. System, Sewage Treatment Plant, Rain Water Harvesting.
- Energy conscious buildings.
- Provision of separate prison for High Security prisoners and First Time Offenders to ensure total segregation.

Therefore the issue of over-crowding has been tackled by continuous expansion by the Tihar jail. It is a different story that even today; the actual population of prisoners in the Tihar jail is almost twice as much as the sanctioned capacity.

3.Semi Open Jail

The Tihar Jail has recently established a new wing in the Tihar Complex, Janakpuri, New Delhi which is known as the Semi Open Jail. This is the first of its kind in India.

The Semi Open Jail, along the lines of the concept of Open Jails, is being used to lodge the prisoners who have been sentenced to life and have less than 2 years of that sentence left to serve and have a good track record.

The inmates of semi-open jails have a chance to step out of their cells and earn a wage fixed by the government, though only within the 400 acre campus of the Tihar jail complex. They are allowed to work in PWD, horticulture and other contract based jobs inside the Tihar premises. They also run Tihar Canteen and the Tihar haat, which are official outlets for selling the things which are produced in the factories of Central Jail No. 2.

This semi open jail, apart from further reducing the overcrowding in the Central Jails, provide these inmates with the opportunity to readjust into the society after such a long stay inside the prison cut off from the real world altogether. This is a major step towards their rehabilitation after the release, which could be helpful for them and their family by making them lead a relatively normal life once they are released from the prison.

5.Educational Facilities

The Tihar Jail authorities provide immense educational opportunities to the inmates during their stay. The curriculum is designed in such a way that even after their release, the people can easily continue their education in the outside world and lead a better life. As the website of the Delhi government asserts, an illiterate person landing in Tihar Jail can look forward to being literate if his stay is more than a week.

The most important aspect of the education system in Tihar Jail is that educated prisoners voluntarily teach less educated prisoners.

The educational activity in Tihar Jail are organized at different level for different categories of prisoners like illiterates, neo-literates, semi-literates, literates and for those desirous of getting higher education. There are study centres of Indira Gandhi National Open University (IGNOU) and National Institute of Open School (NIOS), from where a prisoner can pursue his studies and he is given certificate/degree for that course without mentioning the place of examination being a jail.

Literate inmates are provided training and then help the Prison administration in imparting education to other inmates. Special attention is given to illiterate inmate so that he may be able to read and write his name within a week time. Advance educational avenues are available to prisoner so that if they want to pursue higher studies they may do so through IGNOU etc. Special attention is also given for the prisoner appearing for various competitive examinations.

All the costs, including the fees, the stationary and anything a prisoner might need for a proper education, is borne by the Government.

Ensuring proper and adequate education to the prisoners is a huge step towards reformation. As it has been continuously observed, one of the major reasons for crimes throughout the world is lack of education and unemployment. Education helps the inmates to make themselves capable enough to work in the outside world on release and hence, lead a crime free life. Moreover, education to the prisoners makes them more aware of their rights and responsibilities. Hence, it ensures a miscellaneous welfare of the prisoners.

As a part of vocational training, the products being made inside the prisons are marketed outside. In fact, there is now a brand name “TJ” under which various products being produced by Tihar inmates are sold, and revenue earned. There are Tihar Haats across Delhi which exclusively market such products, and have a loyal band of consumers.

7.Recreational Facilities

Various programs like the “Tihar Olympics” and the “Ethnic Tihar” ensure good light hearted recreational facilities for the inmates of the Tihar jail.

LITERATURE STUDY

CELLULAR JAIL (KALA PANI) AT ANDAMAN & NICOBAR ISLANDS (INDIA)

- The cellular jail, also known as kālā pānī was a colonial prison in the Andaman & Nicobar islands, India. The prison was used by the British especially to exile political prisoners to the remote archipelago.
- Many notable freedom fighters such as Batukeshwar Dutt, Yogendra Shukla and Vinayak Damodar Savarkar, among others, were imprisoned here during the struggle for India's independence. Today, the complex serves as a national memorial monument.



History

- Although the prison complex itself was constructed between 1896 and 1906, the British had been using the Andaman islands as a prison since the days in the immediate aftermath of the sepoy mutiny of 1857 more prisoners arrived from India and Burma as the settlement grew.
- Anyone who belonged to the Mughal royal family, or who had sent a petition to Bahadur Shah Zafar during the rebellion was liable to be deported to the islands.
- The remote islands were considered to be a suitable place to punish the independence activists. Not only were they isolated from the mainland, the overseas journey (kala pani) to the islands also threatened them with loss of caste, resulting in social exclusion.
- The convicts could also be used in chain gangs to construct prisons, buildings and harbour facilities. Many died in this enterprise. They served to colonise the island for the British.

Architecture

The construction of the prison started in 1896 and was completed in 1906. The original building was a puce-coloured brick building. The bricks used to build the building were brought from Burma.

The building had seven wings, at the centre of which a tower served as the intersection and was used by guards to keep watch on the inmates; this format was based on Jeremy Bentham's idea of the panopticon.

The wings radiated from the tower in straight lines, much like the spokes of a bicycle wheel. A large bell was kept in the tower to raise an alarm. Each of the seven wings had three stories upon completion. There were no dormitories and a total of 696 cells.

Each cell was 4.5 by 2.7 metres in size with a ventilator located at a height of 3 metres.

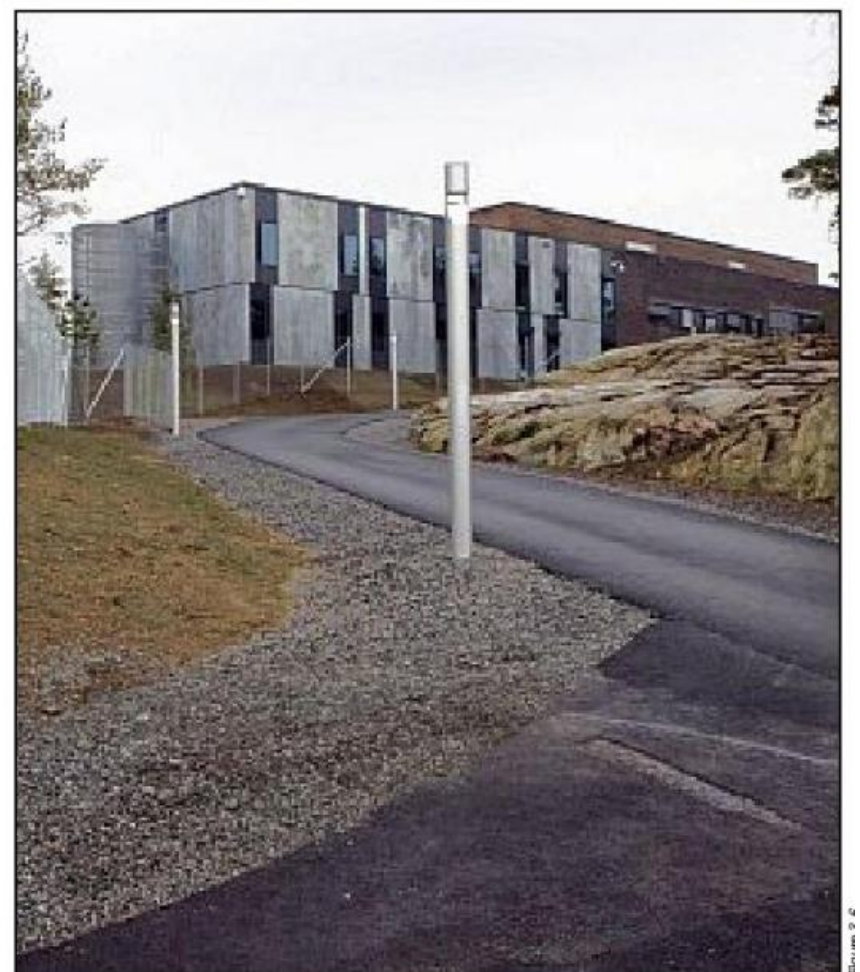
The name, "cellular jail", derived from the solitary cells which prevented any prisoner from communicating with any other. Also, the spokes were so designed such that the face of a cell in a spoke saw the back of cells in another spoke. This way, communication between prisoners was impossible. They were all in solitary confinement.



LITERATURE STUDY 01

1. Halden Prison

- The Halden Prison in Halden, Norway is a well-discussed prison as it shows how much of a role architects can or should have. This Prison is mentioned many times in articles as one of the 'most luxurious' or 'most humane' prisons in the world. The Halden prison houses around 252 male inmates and was opened in 2010.
- One of the major reasons this prison is getting a lot of critical responses is because of the extremity of the facility. Prison cells include amenities such as a television, fridge, art, and nicer furniture than most prison cells. The prison also contains living rooms for every 10-12 cells and provides plenty of activities such as running, rock climbing, or other means to give the inmates a more communicative environment to spend their time. To avoid creating unnecessary intimidation between inmates, half of Halden prison guards are female and do not carry guns.



- As this project is in Norway and its recidivism rates are much lower compared to the US (20% compared to 67%), this shows rehabilitation has a strong impact on lowering recidivism rates. Although the public has many conflicts with the idea of focusing on rehabilitating inmates and using positive reinforcement as a means to help them get back into society and function properly, this method shows that crime rates have lowered and the prison population as well as return rates. Even if this kind of architecture is more expensive than the prison systems in the US, understanding that the return rate is less than a third compared to the US proves that money well spent on rehabilitation will save taxpayers money.
- One of the most successful aspects of the institution is that it feels more like a holiday camp or a behavioural facility than a correctional institution. The prison is located in a forested area with a great amount of effort is put in the landscaping around the facility. One of the ways rehabilitation through nature would also be put in place is by using thick secure glass for windows rather than bars. "The key principle is one of humanity - treat people like animals and they will continue to behave as such, but give them the opportunity and surroundings to realize their inner humanity and build on it, and the people who are released maybe more human than those who went in."



Figure 3.6

Many people might look at the prison as luxurious, but one cannot ignore that inmates are still in lockdown here. They are not with their families or friends, and Halden prison as much as other facilities do not come without brutality. The perimeter walls are finely finished but nevertheless intimidating masses of concrete. Furthermore, the facility allows for a much better working environment than the average US prison. Guards and inmates are encouraged to interact kindly with each other, thus making the prison a more family-like environment where each element of the prison allows the inmates to improve their behaviour and encourage them to be civil in the outside world.

Lessons learned:

- Rehabilitation has a great impact on inmates
- This can be done through architectural means: taunting noise, comfortable humane and inviting spaces
- Daylight and natural views are encouraged to help ease the mind
- Landscaping allows for a therapeutic time during imprisonment
- Guard and inmate relationships show there is no power struggle
- The more you try to control or fear something, the more it is likely to retaliate
- Trees visually block the view of the protective walls
- Community spaces allow prisoners to easily adjust to the real world
- However, excessive spending on certain items are not necessary



LITERATURE STUDY 02

2. METROPOLITAN CORRECTION CENTRE

The Metropolitan Correctional Center, located in downtown Chicago, is part of a federal program of metropolitan correctional centres, also known as MCC, which would be a new type of detention facility for accused persons awaiting trial or inmates serving short sentences. The Metropolitan Correctional Center in Chicago was one of five selected institutions to be built as a means of offering humane prison conditions in 1972. Many troubles were faced once the building's location was set in downtown's corner of Clark and Van Buren St. One of the major requirements for prison design was to "enhance and protect the character of their urban surroundings. One of the architect Harry Weese's objectives was the idea of the architect having a moral imperative to ease the social stereotypes towards the prison system and inmates. The 27-story prism shaped tower completed construction in 1975. Located at the corner of the two streets the prism shaped building erected from a triangular plan is viewed from the corner as an illusion of a two-dimensional plane without sides. The character and interest of the building come from the contrast of its simple prism shape and the slit windows piercing its façade.



The structure is built in such a way to ensure prison cells are on the perimeter of the skyscraper. The jail can hold up to 440 inmates, separated into self-contained sections of 44 people. Each section comprises of two floors with single-room cells. At the centre of the plan is a common area, as well as a station from which a single guard can keep watch on the perimeter cells. This area is double the height of the regular cells. The windows of the cells were initially designed without any bars; however, they are comparatively small windows to the Halden Prison in Norway. The reason for the smaller five-inch wide windows in the MCC is due to the restriction of the maximum width by the Bureau of Prisons. In 1985, interior bars were added to these windows after inmates on the top floor of the facility escaped by enlarging one of the openings and rappelling down the exterior on an extension cord. Staff offices on the lower floors, are distinguishable through the wider windows. All of the openings are separated, enlightening the view angle from the interior as well as suggesting at the narrow loops found in medieval fortifications. The brutalist approach of the design is shown by leaving the building holes from the form tie bolts unfilled and the refined imprints in the concrete surface created by the formwork untouched. The raw qualities of the brutalist approach, however, appears to be unfriendly to the person transitioning in these spaces. The rough quality of the interior has prisoners feeling claustrophobic.

With the intent to integrate the MCC into downtown Chicago's urban fabric while accommodating public acceptance, the MCC put little to no effort into rehabilitating prisoners transitioning in this space.

The MCC houses both female and male inmates of all kinds. These include inmates with medical problems and those accused waiting for sentencing.

Mainly the MCC is a transitional institution; when it does house several inmates for their entire sentence it is due to their short sentence and they do not need to be relocated.

Rather than being a rehabilitative institution the MCC is more of a storage unit for inmates during their transitional period. Guards tend to not be particularly friendly at these institutions with aggravation and bullying being ways the guards force their sense of power on inmates. MCC like 499 Summit is a vertical structure that has a centralized plan for guards to observe the inmates. Although the intent of 499 Summit is a socialized environment positively enforced from guards and inmates, it still brings up the hierarchy that has a negative impact in the MCC.

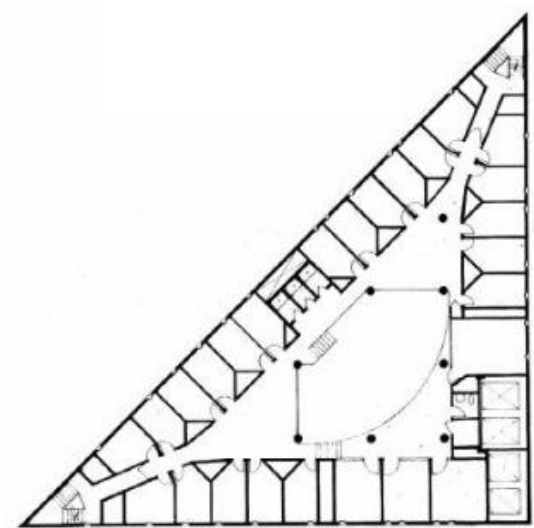
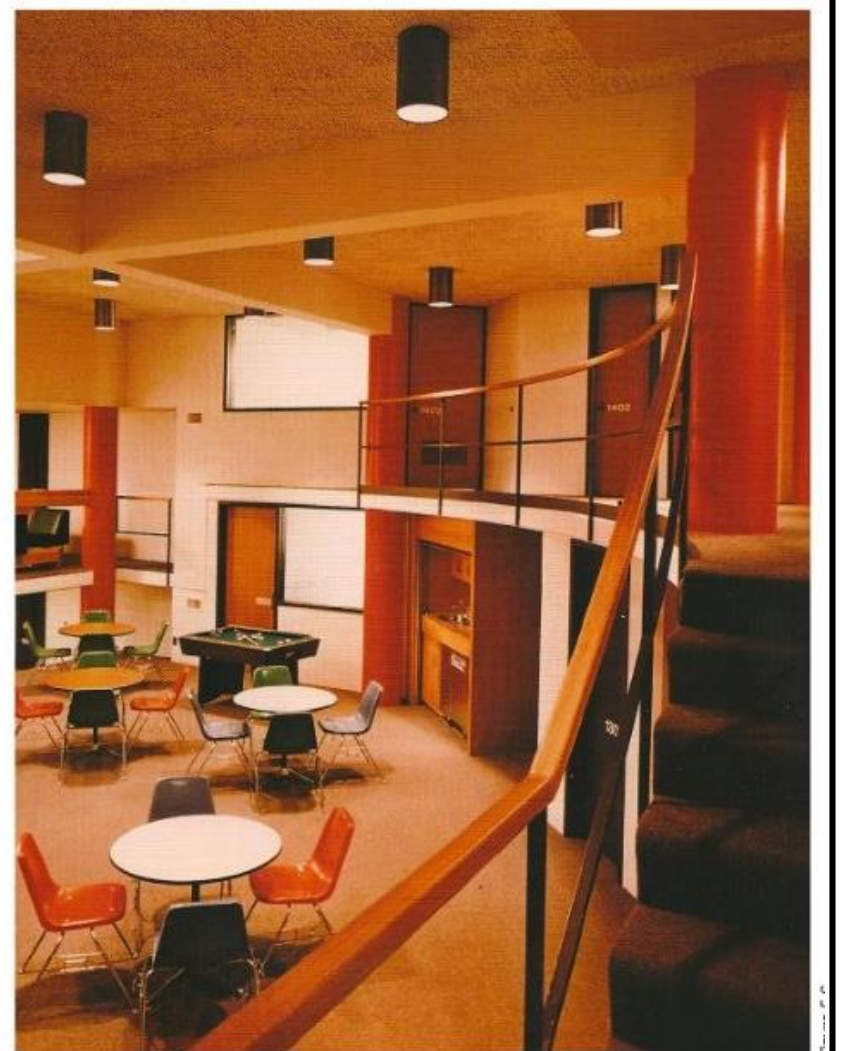


Figure 5.4

Moreover, the skyscraper does not have many attempted escapes from inmates because of its contained environment and its close proximity to the general public, which means there are many security measures held to ensure safety.



- Lessons learned:
- Brutalist structures tend not have great impact on prisoners; the cold washed walls aided little to prison transitioning in this place.
- MCC makes an attempt to integrate into the urban environment from the outside.
- But it does not take advantage of the amenities that could lead to rehabilitation or transition of short-term prisoners

SUMMARY

Design Objectives:

- Aesthetical pleasing incarceration system that can be integrated in an urban setting.
- Not neglecting the nature as a rehabilitative means.
- Entrance and exit are important for prisoners and visitors as well as workers, ensuring these do not have a negative impact to either party
- Finding a way to create an environment where power is not easily abused
- Finding a way to be able to rehabilitate prisoners and reward them for their effort
- One of the biggest psychological impact is the claustrophobic environment prisons create-time consumes you

- It is necessary to integrate natural ventilation as well as natural daylight to allow prisoners have a sense of meaning and time
 - Solitary confinement needs to become a spiritual reflective space rather than a storage unit
 - Vistas, acoustics, materials as well as design decisions of spatial quality are vital
 - Group rehabilitation to reduce prisoner to prisoner violence.
-
- Analyzing the social aspects as well as the psychological aspects of prison systems sheds light on how structures that try to force positive change, even in an urban setting, have a tendency to fail. Making sure there is a way to break the hierarchy of prisoners feeling degraded by the guards' presence remains as top priority. Ensuring a positive environment close to amenities necessary to allow prisoners to understand their reasons for imprisonment eventual societal reintegration is another goal.
-
- Punishment is already foisted on prisoners by stripping them of their freedoms and accessibility to their everyday environment. The part that needs a lot of focus is the rehabilitative aspect to prison as well as phasing them to become better citizens. All three of these projects reveal an understanding of how to take bits and pieces of their successes or pitfalls in the design process.
-
- Prison systems are a tricky project program; there are many things one needs to consider. The wellbeing of the public, the prisoners, and the guards, as well as security measures and ways to find rehabilitative means, are necessary for a successful proposal.

INFERENCES OF CASE STUDY

It is observed that the work regarding corrections in prisoners by controlling psychological barriers through architectural design is yet to be started.

It is also observed that prison architecture has a lot of impact on the psychology of the prisoners. In the present scenario the purpose of the prison is entirely changed. The prisons are not meant for giving physical and mental torture to the prisoners now, the objective of the prisons diverted towards making the programs for the rehabilitation of the prisoners so that to make a successful re-entry of them into the society. The idea is to change the criminal mind of the prisoner by merging them in the society as a normal man once again. The prisoner in this way will get respect and shall be checked from the act of recidivism.

The inadequate and poor facilities provided to the prisoners have a negative impact on the psychology of the prisoners. Similarly bad behaviour of prison staff towards the prisoners causes negative impact. Now the prisoners are not kept in dungeons, within a sewer system beneath the city in squalid condition with human waste, they are not sentenced to slavery but they may be made realized that you are not a person to be kept in a society, bad person to be penalized and to be kept separate from the main stream. In this way they may be insulted which may lead to depression.

It is observed that prison architecture has a vital role in making the psychology of the prisoner positive which is a prerequisite for the rehabilitation. If an architect gets successful in finding out the negative impacts of architectural elements on the psychology of the prisoners definitely he will be able to design the prison such that it will have only positive effects on the prisoners. When a positive approach is developed in the prisoner he will become healthy and remain always cheerful. This will make him enough bold to even also manage with the bad facilities provided to him, and in making good prisoner- prison staff relationship.

The Architectural features to be considered while designing a prison campus with the basic aim of reformation of the prisons are as follow:

The Architectural features to be considered while designing a prison campus with the basic aim of reformation of the prisons are as follow:

- Layout of the campus
- Shape of the barracks with the approach to give a positive
- Proper day lighting so that one can read comfortably.
- Proper natural light in the day time and dark in the night gives a sound sleep which keeps the prisoners cheerful. Excessive day light in barracks due to large windows and very low day light in cells due to small windows have negative impact.
- Long linear barracks gives a monotonous effect
- Prisoners do not get privacy at any moment of time in such crowded barracks.
- Portable beds are not provided and concrete beds are not allowed to build, prisoners use floor for sleeping. Concrete beds are avoided to accommodate more prisoners- inhuman condition.
- Materials used in floors and walls are decayed soon and the broken floors and plasters gives a negative impact. Material must be suitable for the specific function of the space. The inconvenience of using and maintaining a space is also a resource for stress.
- Harsh view of high massive & monotonous boundary walls gives negative impacts. Colour, art, esthetic and entertainment (music, humor also) have also vital role in the psychology of human being. Colours have a direct influence on people's mood. Warm and saturated colours bring excitement and often increase appetite; cool, less saturated and bright colours relaxes us, and hints people to handle problems calmly.
- Harsh view of fields outside the barracks without grass, flowering and shady plants. (I.e. viewing of nature gives relief) natural environments are among the most restorative of settings, their actual power is being revealed in recent research. Natural access or views have been shown to be important in helping people cope with stress and recover mentally fatiguing experiences.

- Inadequate provisions in kitchen, unhygienic and hence negative effect.
- Inadequate provisions in hospital.
- Huge acoustical problem in meeting halls for prisoners and their relative has great negative impact. Everybody becomes tired of noise pollution. Noise is pervasive, disruptive and disturbing. Hard surfaces resulting in extraordinarily high reverberation times and uncomfortable acoustic condition. Noise can directly affect operations.
- Improper design of drainage, water supply and sewerage also makes unhygienic condition and hence give negative impact.
- Facilities like community centres / multi-purpose hall, school, other work places than farms (i.e. workshop), gymnasium, field and track games, library (newspaper) etc are missing.
- Problems of WC block and bath platform.
- Campus prisons which are characterized by small living unit may facilitate more and more personal staff –prisoner interactions proved better for the positive impact on prisoners. Panopticon prisons were constructed with a focus on prisoner surveillance, as staff could observe all prisoners of the facility from the center of the building. This physical distance between staff and prisoner is likely to result in more detached and distant officer-prisoner relationship creating negative impact on the psychology of the prisoners.

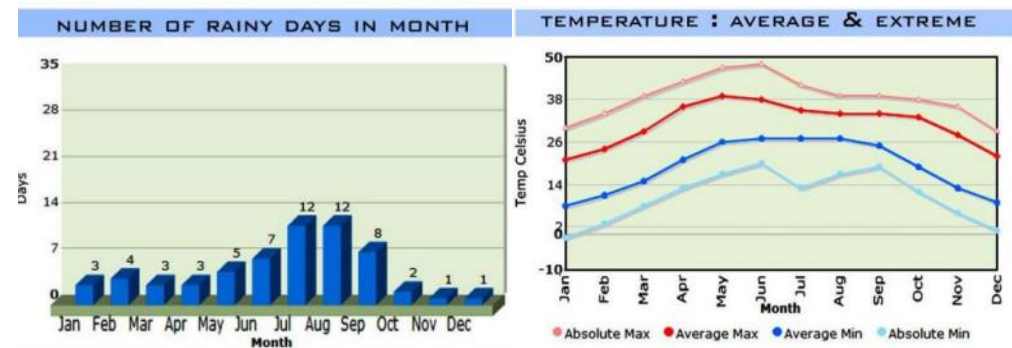
Site Analysis : Impact of Built Environment for Improving Psychology & Behavioural Aspects of Prisoners – in case of Moradabad City

MORADABAD : AN OVERVIEW

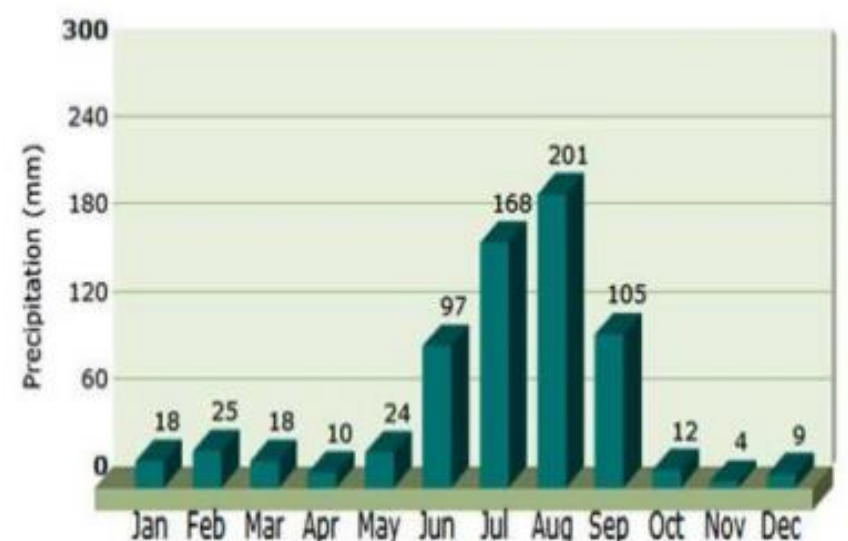
- Moradabad is a city in Uttar Pradesh state of India. It was established in 1600 by Murad, the son of the Mughal Emperor Shahjahan; as a result the city came to known as Moradabad.
- Moradabad is situated at a distance of 167 km (104 miles) from the national capital, New Delhi, at the bank of River Ram Ganga (a tributary to the great Ganges).
- The city is famous for its huge export of brass handicrafts to North America and Europe, and is also thus called 'Brass City' or Peetal Nagri (in the local language).It has close to four million citizens of various ethnicities and religions
- According to the 2011 census Moradabad city has a population of 887,871.
- The district has a population density of 1,284 inhabitants per square kilometer (3,330/sq mi). Its population growth rate over the decade 2001-2011 was 25.25%.
- **Geography of moradabad Location:** This city is situated in western U.P. between 28°-21' to 28°-16' Latitude North and 78°- 4' to 79 Longitude East.

CLIMATE IN MORADABAD

- Located in the north west of India Moradabad experiences a humid subtropical climate. Characterized by a seasonal rhythm c the weather and climate in Moradabad varies with different temperature. Temperature in Moradabad varies with change in weather as given in table. The average rainfall is 967.3 mm



PRECIPITATION AMOUNT

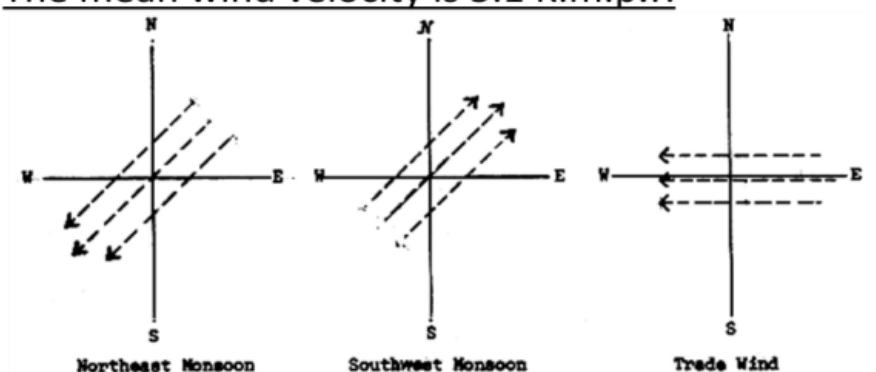


WIND SPEED (KMPH)

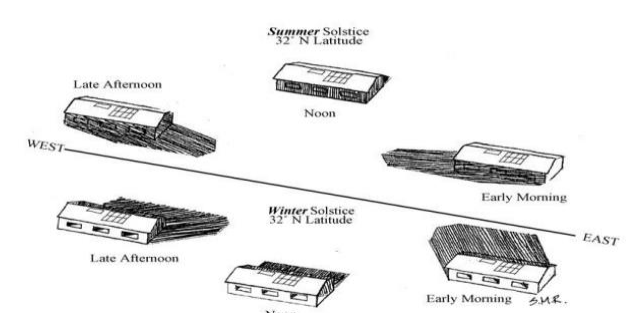


WIND MOVEMENT

The mean wind velocity is 5.1 K.m.p.h



SHADOW



- Site detail
- Client: U.P. Prison department
- Location: manderwala majhra (mundha pande), district moradabad, uttar pradesh
- Site area: 99.4acres
- Shape-irregular
- Topography: the site is flat land

Nearest bus stand:

Moradabad bus stand- 19 km

Nearest rly. Stn :

Mudha pande railway station - 12.5 km away dalpatpur railway station - 14.4 km away got railway station - 16.1 km away

Nearest airport :

Nearest airport to the site is pantnagar airport, which is 79 km away from the site.

SITE SURROUNDING

WATER BODIES:

- Ramganga river on the west direction around 25km from the site and kosi river on the east direction around 20km from the site.

TOPOGRAPHY:

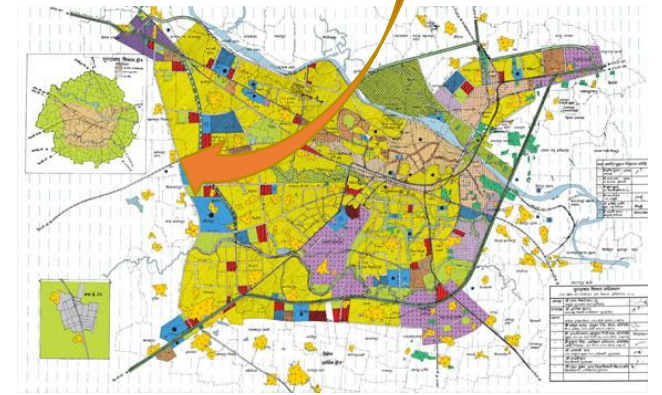
- The site is a plain piece of land with negligible slopes. The site contained mango garden and guava garden on it.

SERVICES:

- Electricity poles exist around the site.
- There is no water pipe line around the site.
- There is no sewer line.
- The mode of transportation to the site is auto rickshaw & self vehicle.

SOIL CONDITION:

- The soil type of the site is alluvial soil.
- The soil bearing capacity is 6 ton/sq. M.



VEGETATION:

- There are the garden of mango trees and guava trees on the site

Swot Analysis

Strengths:

- location: the site is located in the midst of agricultural land with minimum human interference which is an important design factor for the type of project.
- Land type: the agricultural land is present on the site where farming could be done by inmates.
- River: as there is no sewer line nearby along the site river will act as disposal for treated waste.
- Services: electrical poles present near the site, water table is high acting as a source of water supply.

Weakness:

Sewage disposal: is an issue because there is no sewer lines running anywhere nearby the site.

Approach road: present width of the road is not sufficient enough for the traffic movement.

Opportunities:

Site gradient: as compared to the size of the plot the site gradient is almost flat acting as a type of land required for prison design.

Trees: presence of mango and guava trees on the site will help in obstructing summer sun rays and also provide seasonal fruits to the inmates.

Built up zone: minimum built up area around the vicinity of the site gives opportunity to design freely and with minimum restrictions.

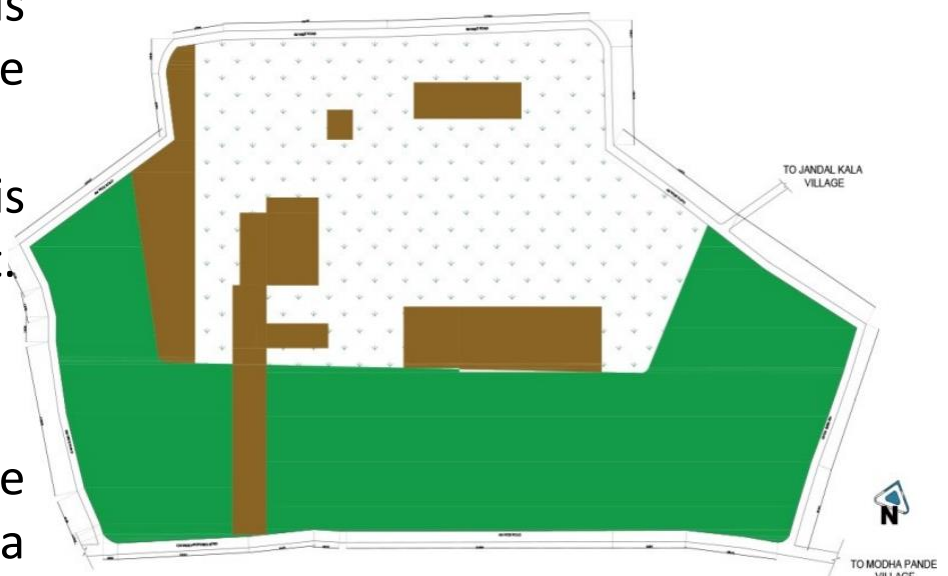
Threats:

security is the main threat.



INFERENCES

- Because of the presence of the site in the outskirts of the city, it has an independent quiet, peaceful environment and is an advantage with respect to the security.
- As there is no problem of transportation from the nh-24, so it would be helpful for the staff members.
- The city life will not get disturbed during emergency situations.
- Electricity has to be considered.



BYE LAWS

- sq.m. Ground coverage: 30%
- Floor area ratio: 2
- Set back front sides: 15 mts
- Back and both rear side : 9 mts
- Parking space requirement specify 1cars park every 100 Of built up area.
- Landscaping: 20% Of total plot area shall be landscaped. Trees shall be planted at a rate of 125 trees per hectare.

Design Amendments that can be incorporated for the prisoners better utilitarian of this society

- Earlier the jails were planned in such a way to cut off the social life of the prisoners from the outside world. But since the concept of jail has now been changed to more of the rehabilitation of the prisoners they are provided with amenities like school, hospital, workshop etc., along with the necessities .
- The prisoners with good conduct are shifted to an open jail for their remaining tenure of the punishment.
- Along with the amenities, the security inside the jail campus could not be neglected, keeping that in mind the iron bars of the barrack windows are given a square shape instead of round shape to avoid easy grip of the prisoners. Along with that a mosquito net is also introduced to the windows of the barracks to prevent insects letting in. this psychology is maintained to deal with the prisoners by keeping them under security with humanity.
- Maximum open spaces are provided to let the prisoners walk freely. The open spaces can be used by them for various means such as farming or for some sports.

TOTAL SITE AREA : 99.4 ACRES
AGRICULTURAL LAND : 75.4 ACRE
TOTAL SITE AREA (FOR PROPOSED JAIL) : 98055 SQM (24 ACRE)
F.A.R :2
TOTAL BUILDUP AREA : 196110 SQM
GROUND COVERAGE : 30% (29416.5 SQM)
PERMISSIBLE BUILDUP : 58833 SQM
ACHEIEVED GROUND COVERAGE : 15116.65 SQM (0.51)
ACHEIVED BUILDUP : 35654.6 (0.60)
ACHEIVED F.A.R : 0.36



FINAL SITE PLAN

Concept

CONCEPT : PANCHA-TATVA

THE WORD 'PANCHATATVA' ORIGINATES FROM SANSKRIT, WHERE "PANCH" STANDS FOR FIVE AND "TATVA" INDICATES ELEMENTS. FOLLOWING THE UNIVERSAL LAW OF LIFE, EVERY THING ON THIS PLANET IS COMPOSED OF FIVE BASIC ELEMENTS OR THE "PANCHAMAHABHUTAS". THESE ARE : AKASH (SKY OR SPACE), VAYU (AIR), JAL (WATER), AGNI (FIRE) AND PRITHVI (EARTH).

EVOLUTION OF OPEN JAIL :

SCHOOL OF THOUGHT FIRST:

IN ANCIENT INDIAN SOCIETY THE KING WAS THE FOUNTAIN OF JUSTICE AND THE PUNISHMENT OF OFFENDERS WAS CONSIDERED TO BE HIS SACRED DUTY. THE PUNISHMENTS WERE:

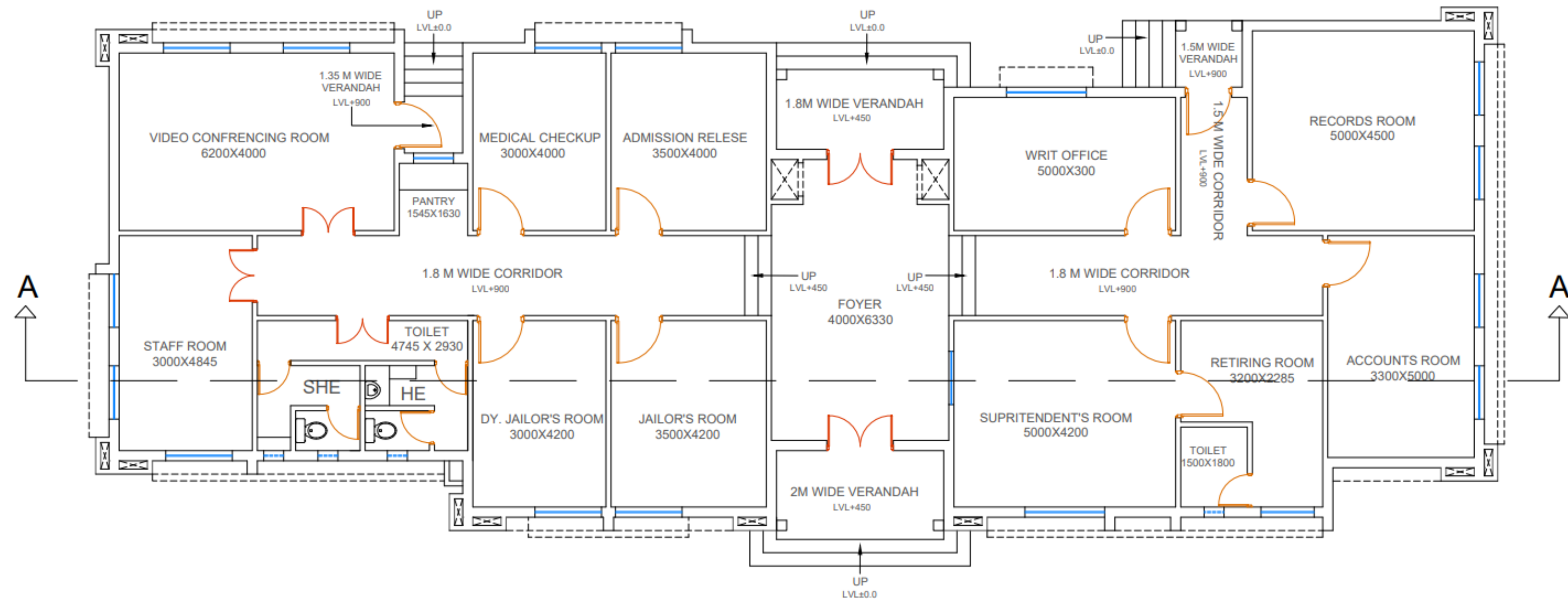


SCHOOL OF THOUGHT SECOND:

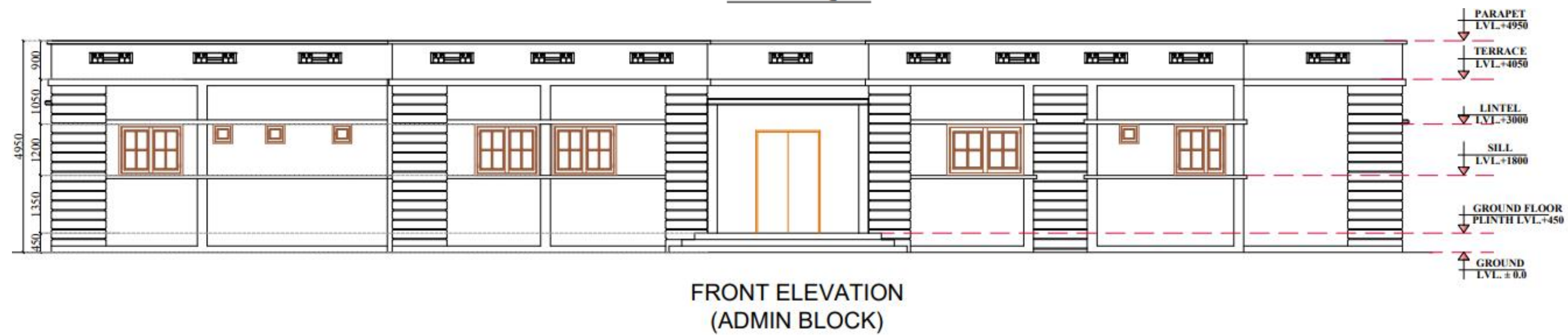
DECIDED ELIGIBILITY - DEGREE & AMOUNT OF CRIME



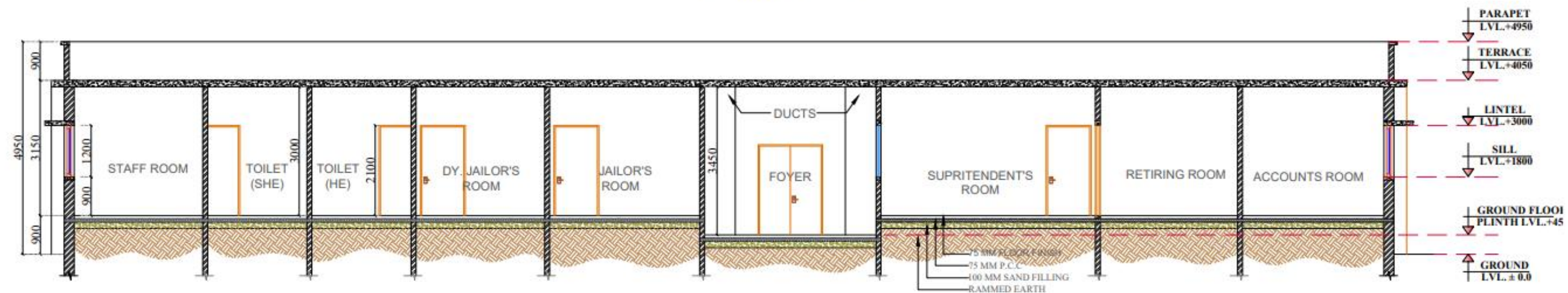
ADMIN BLOCK



ADMIN BLOCK
295.4 SQM.

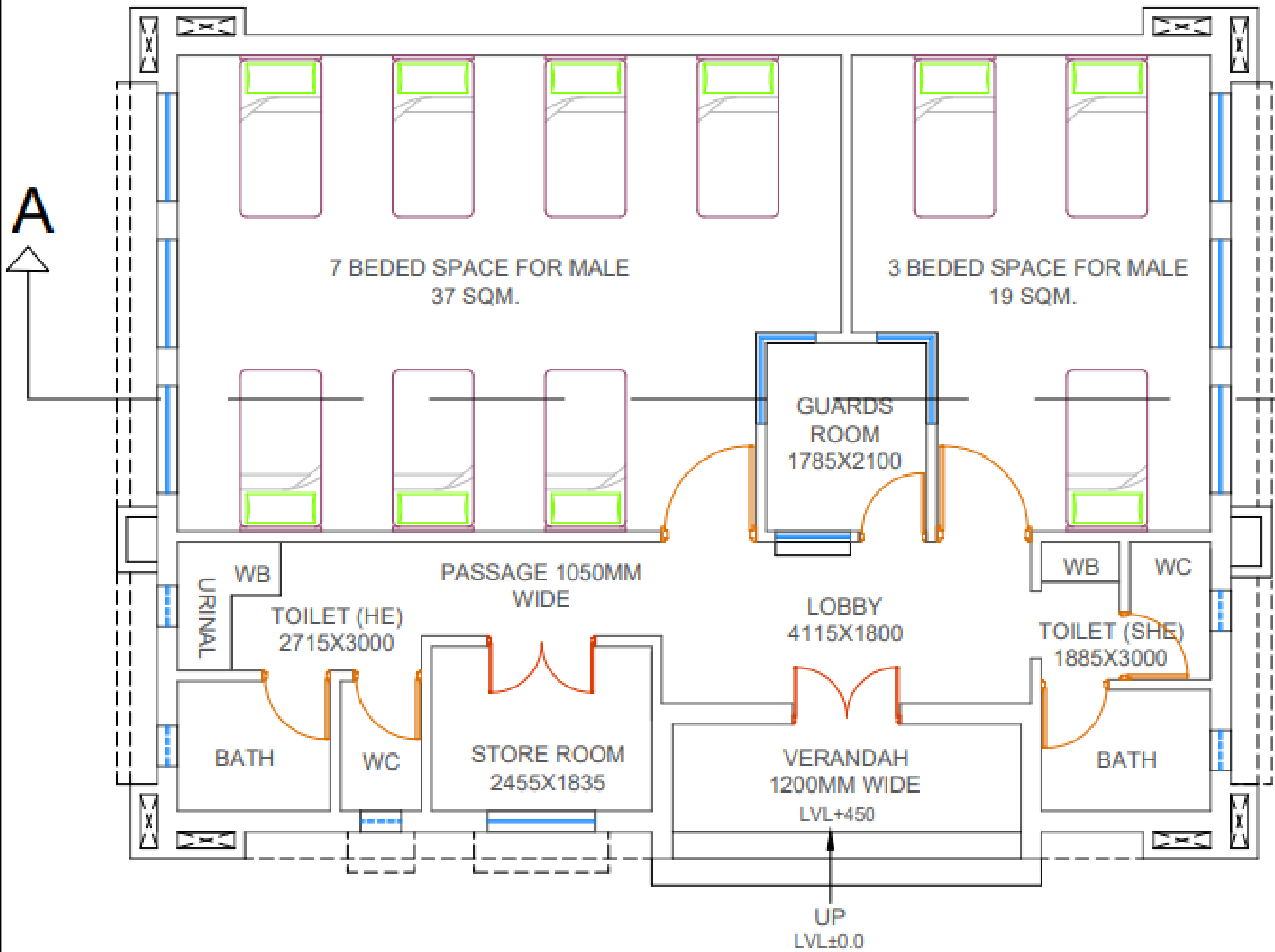


FRONT ELEVATION
(ADMIN BLOCK)



SECTION AT A-A'
(ADMIN BLOCK)

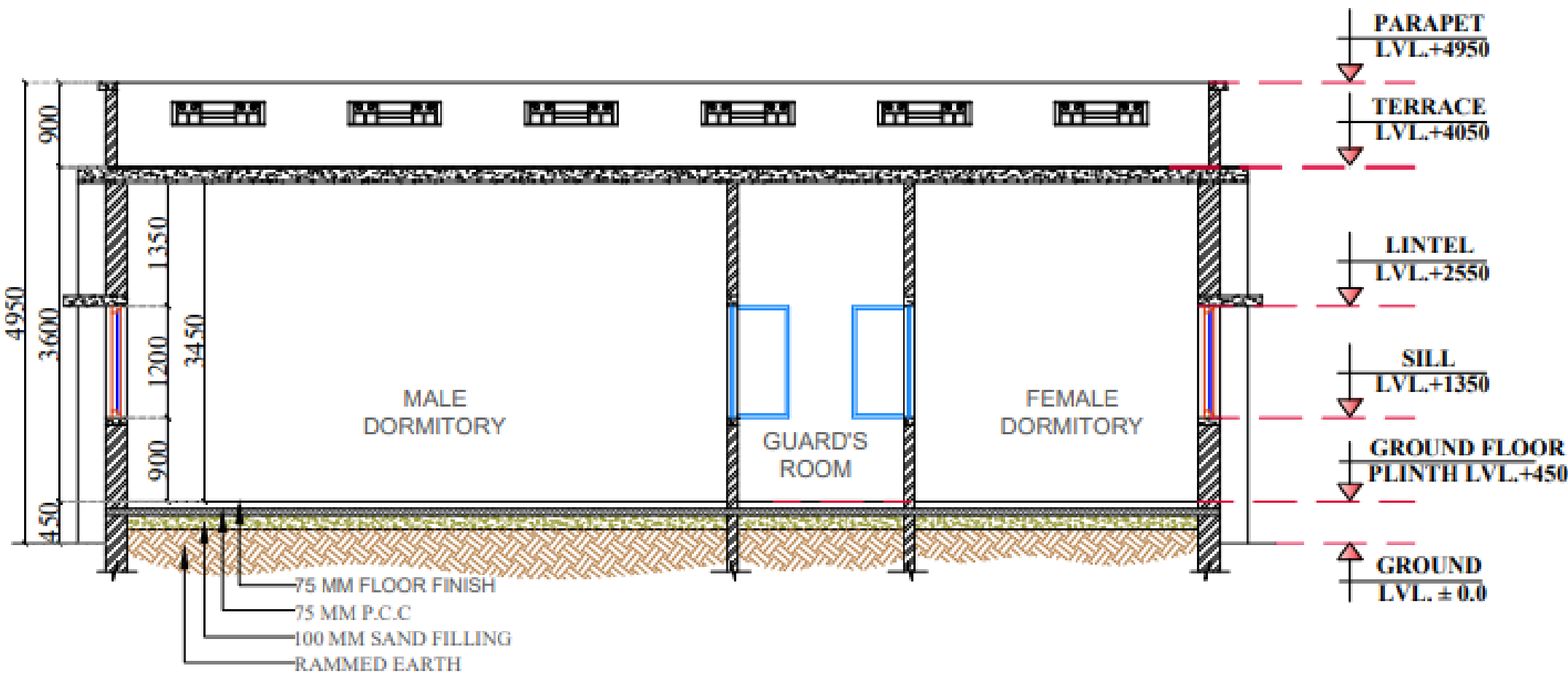
DORMITORY



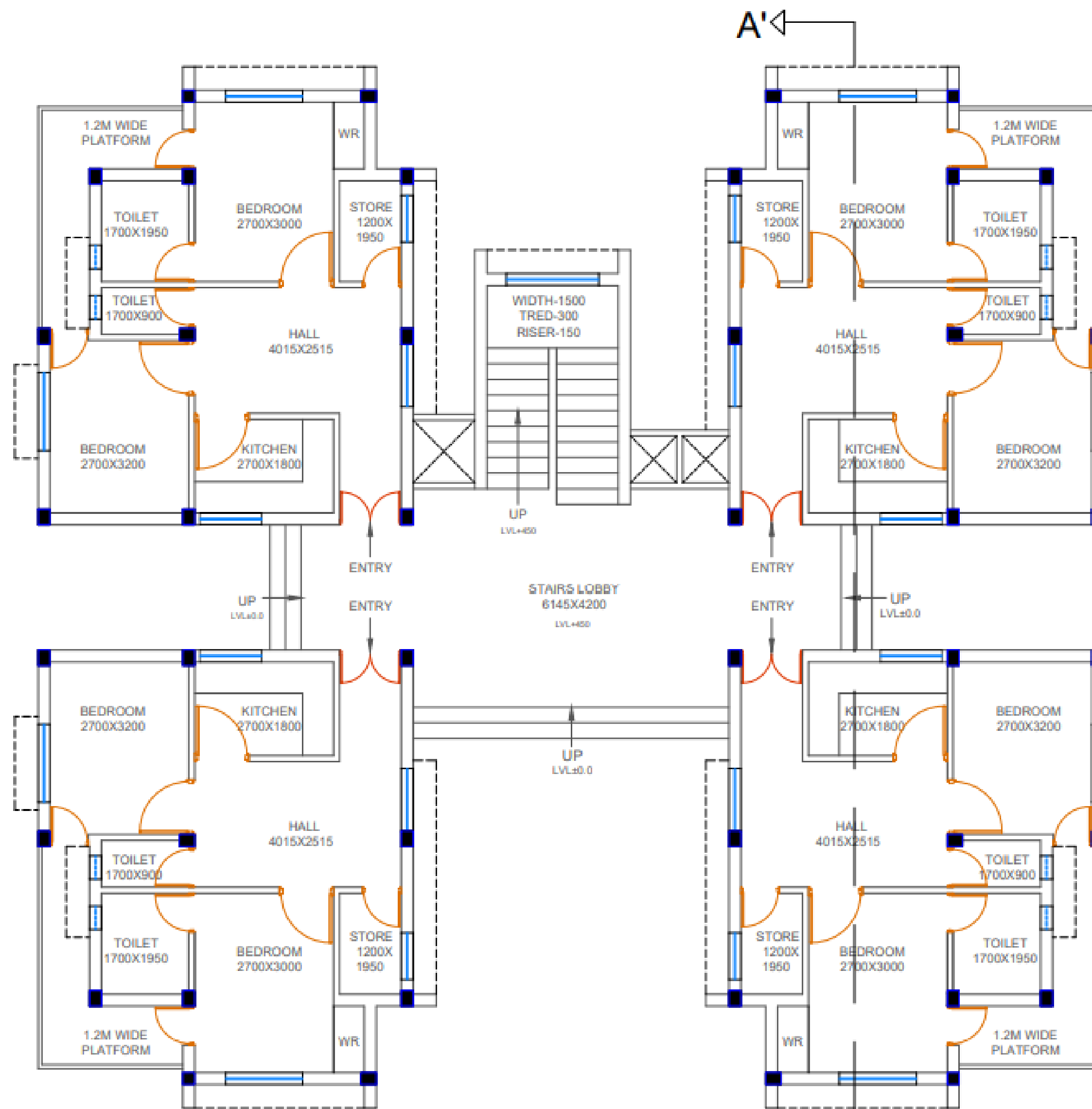
DORMITORY 100 SQM
(10 BEDED)



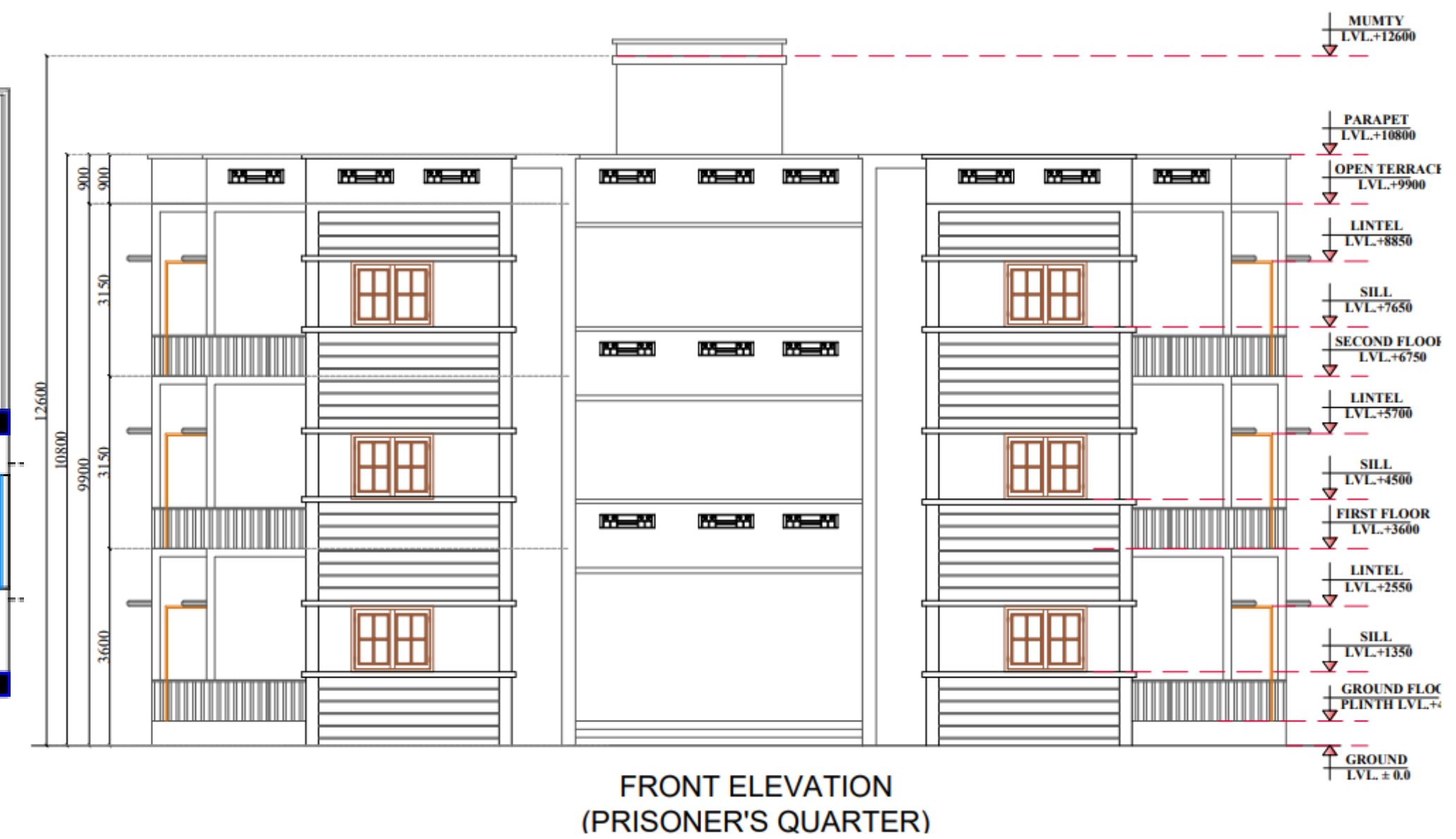
FRONT ELEVATION (DORMITORY)



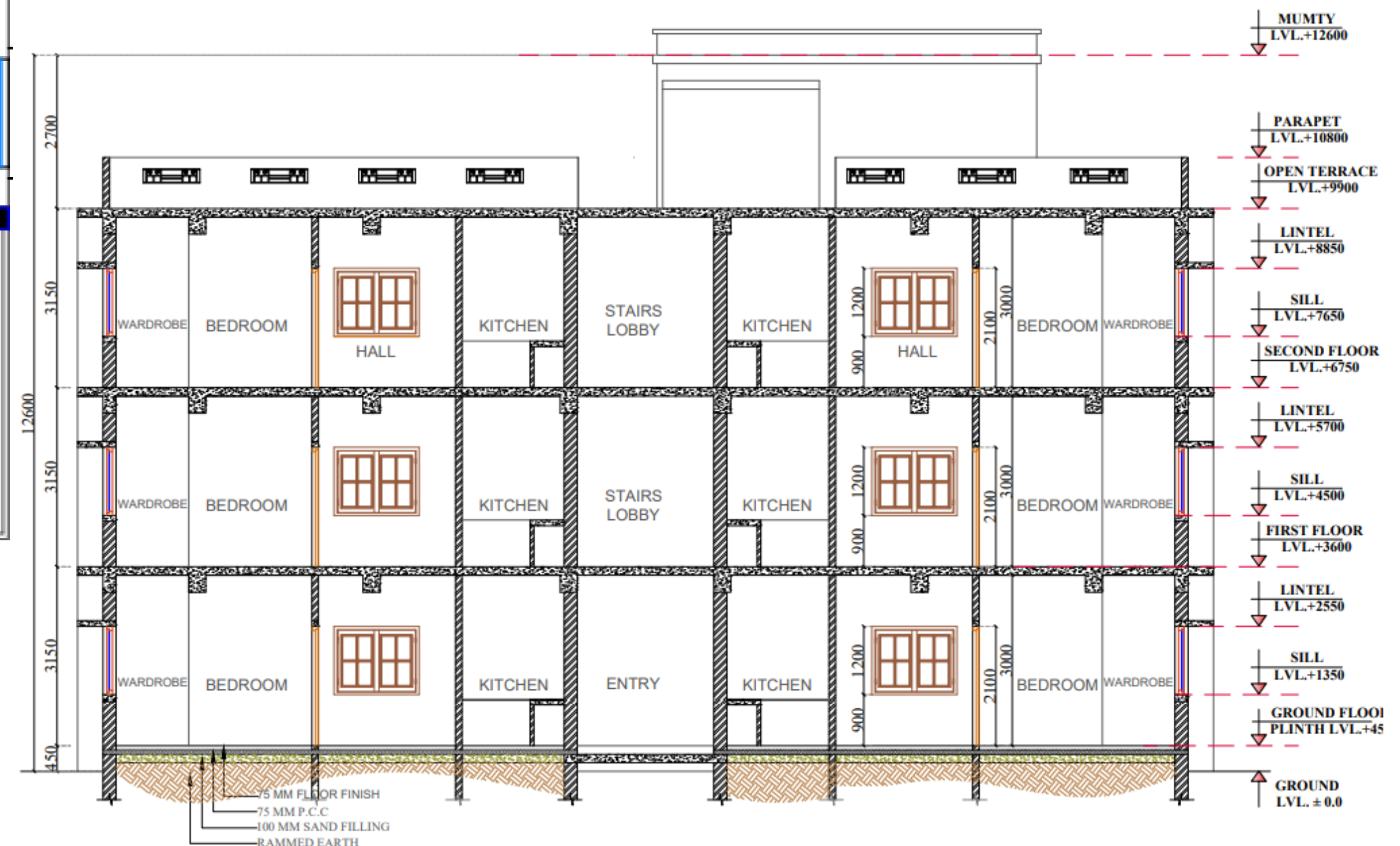
SECTION AT A-A' (DORMITORY)



PRISONER'S QUARTERS 258.7 SQM
(Cluster plan)

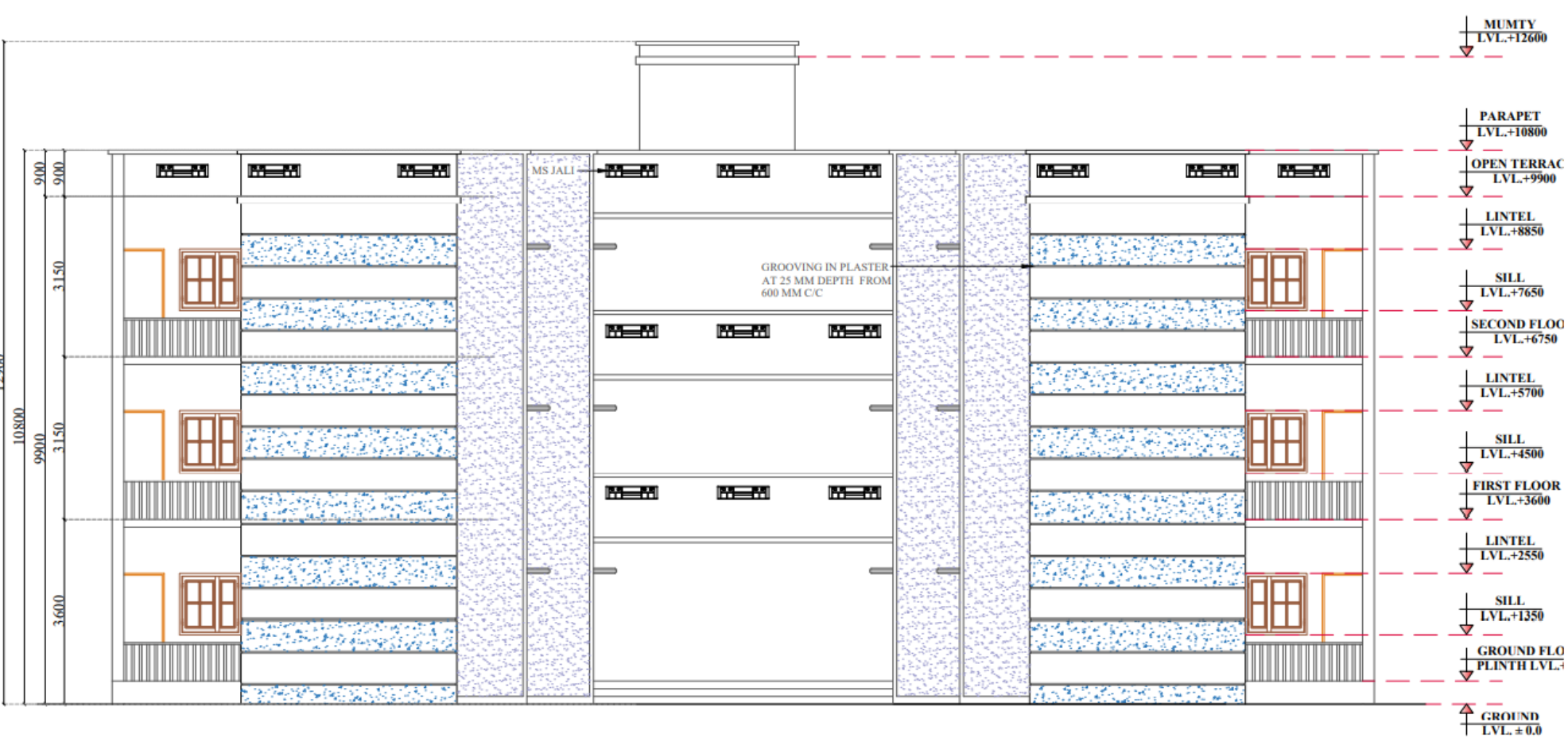
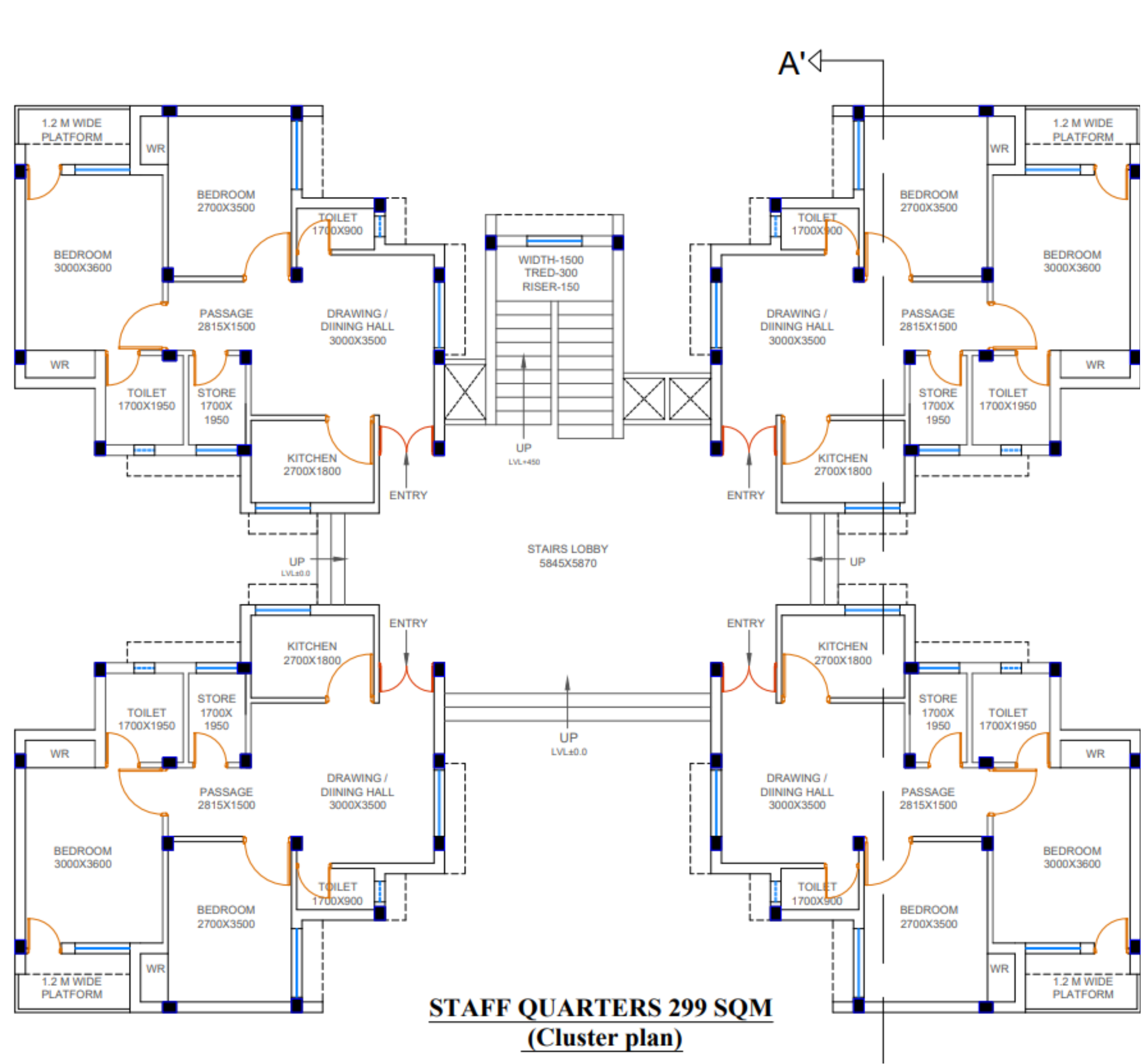


FRONT ELEVATION
(PRISONER'S QUARTER)

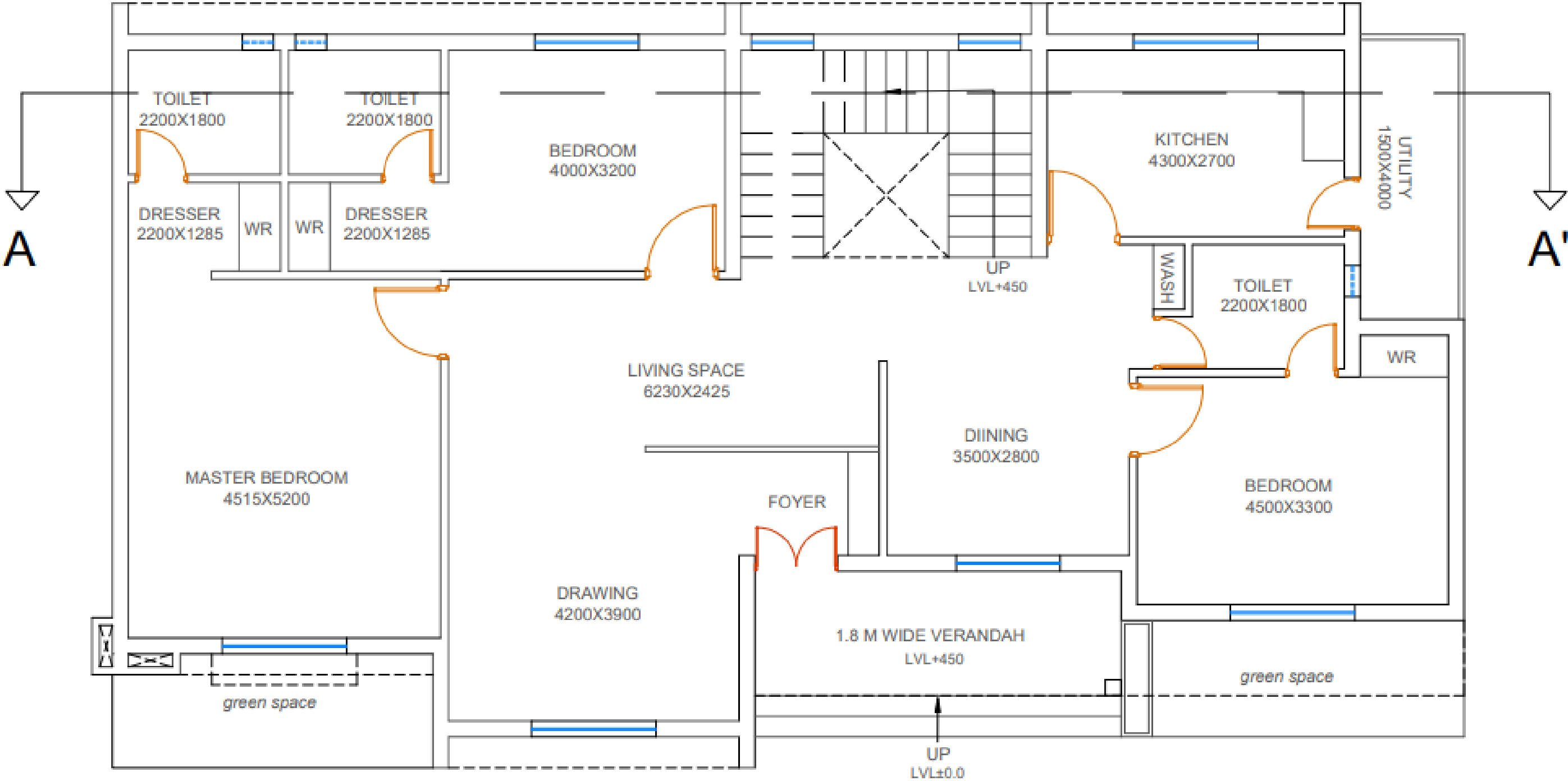


SECTION AT A-A'
(PRISONER'S QUARTER)

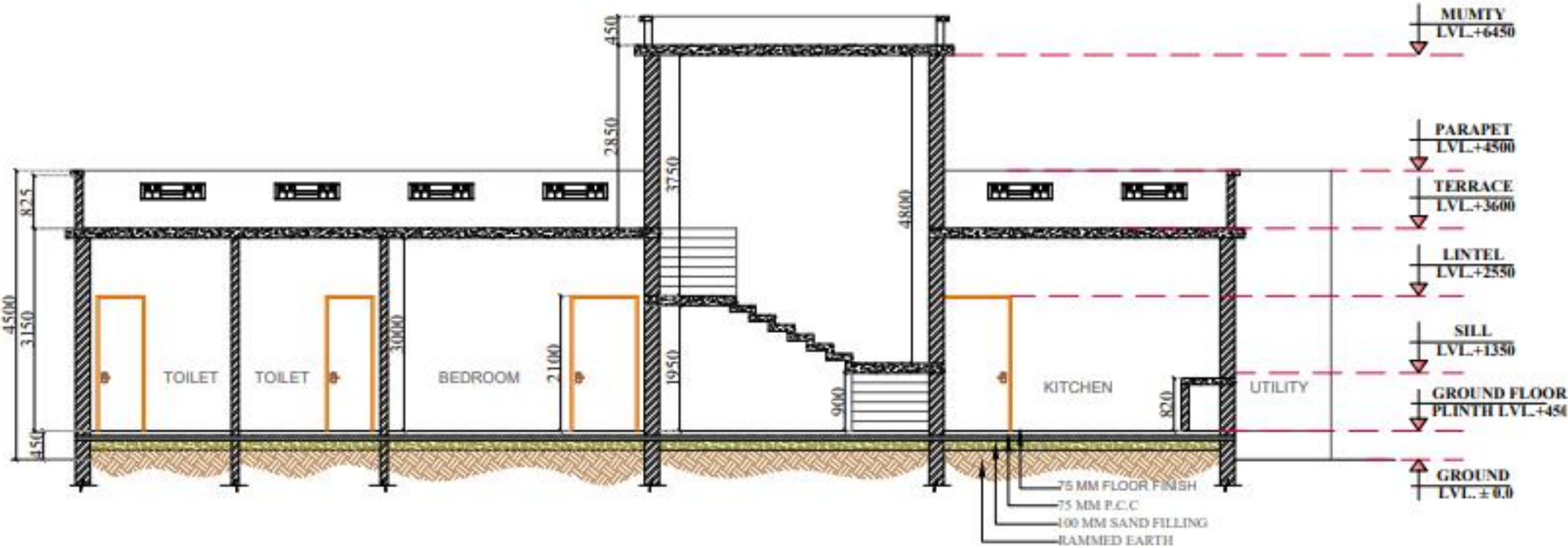
Staff Quarters



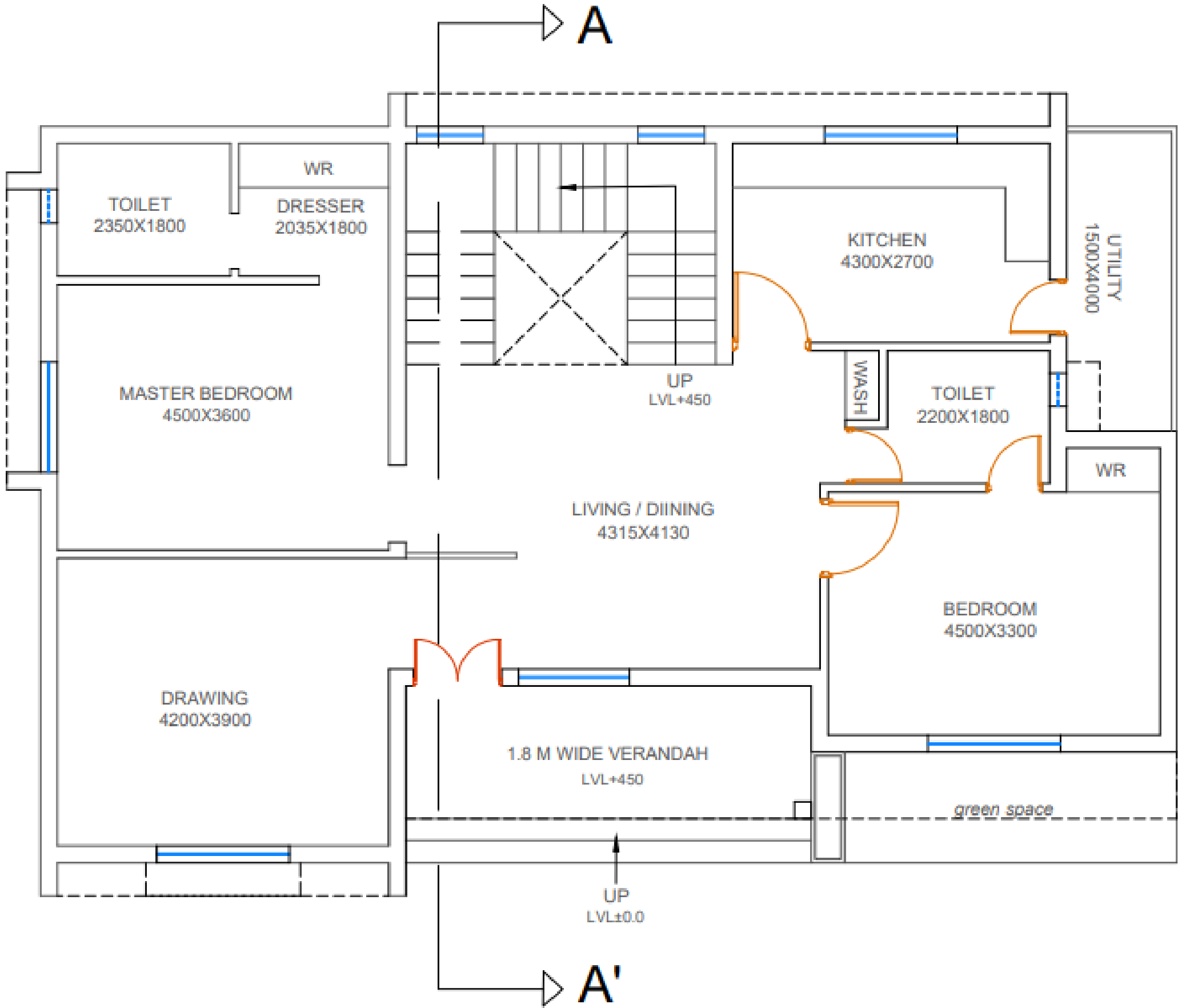
SUPRITENDENT'S RESIDENCE



SUPRITENDENT'S RESIDENCE
166 SOM.



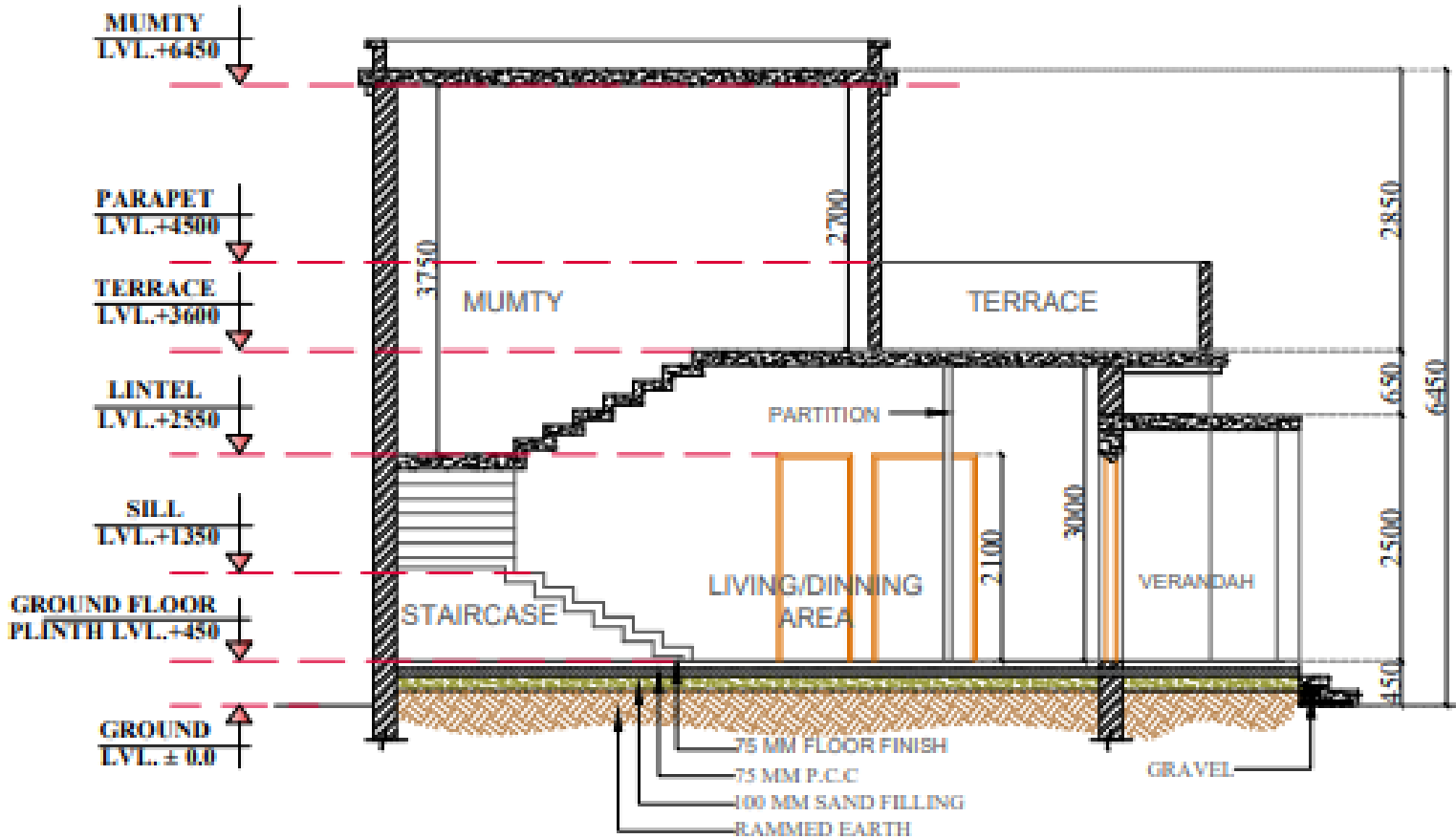
JAILOR / DT.JAILOR'S RESIDENCE



JAILOR / DT. JAILOR'S RESIDENCE
127 SQM.

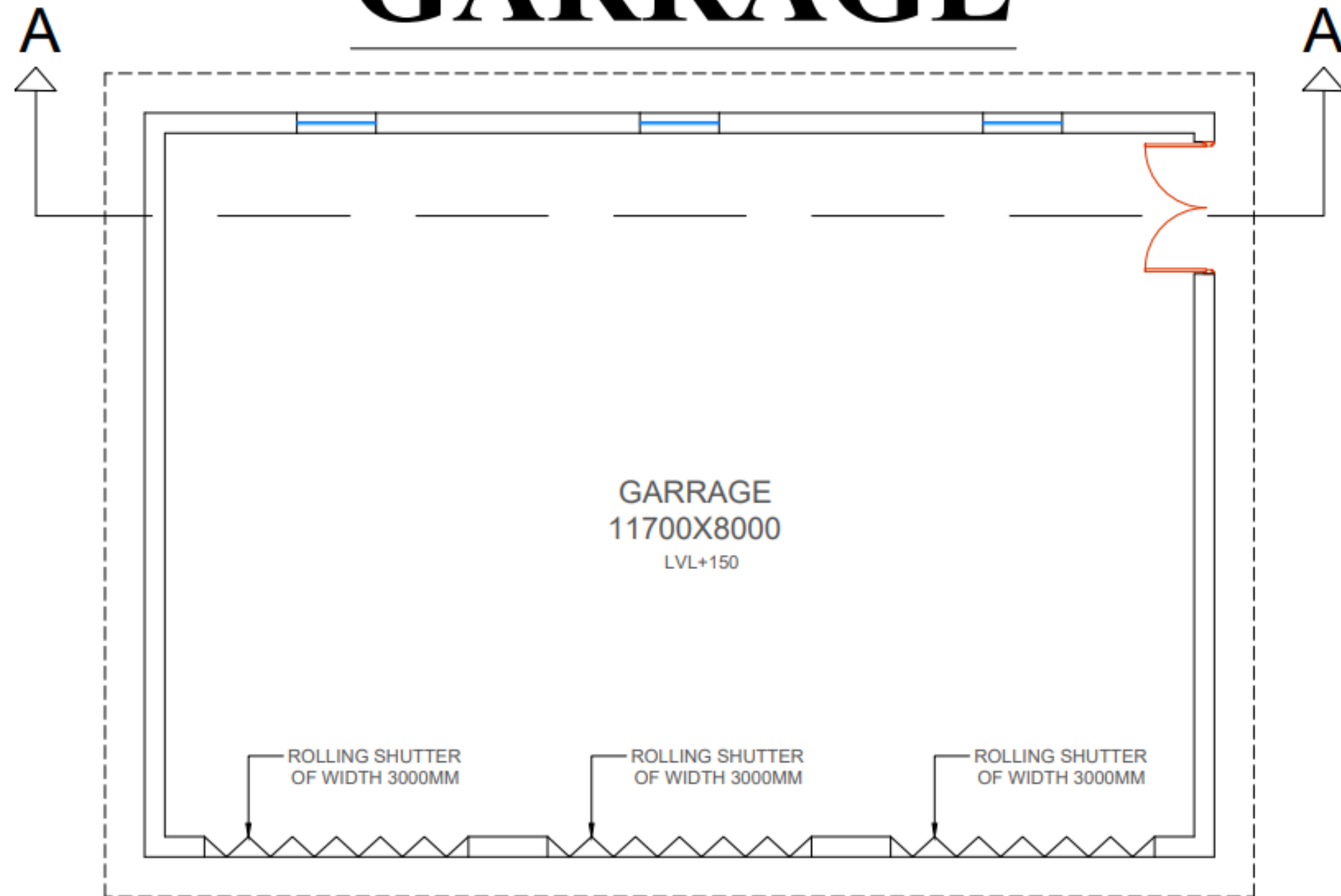


FRONT ELEVATION
(JAILOR & DT. JAILOR'S RESIDENCE)

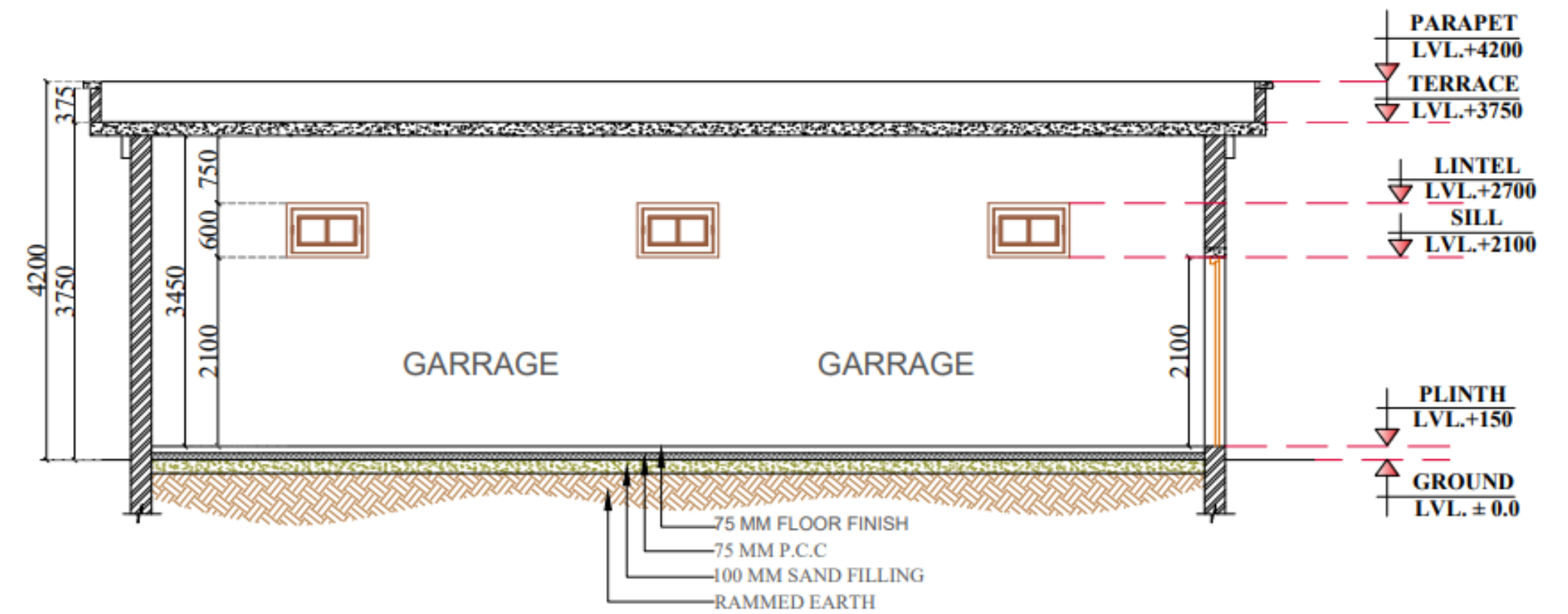


SECTION AT A-A'
JAILOR & DT. JAILOR'S RESIDENCE

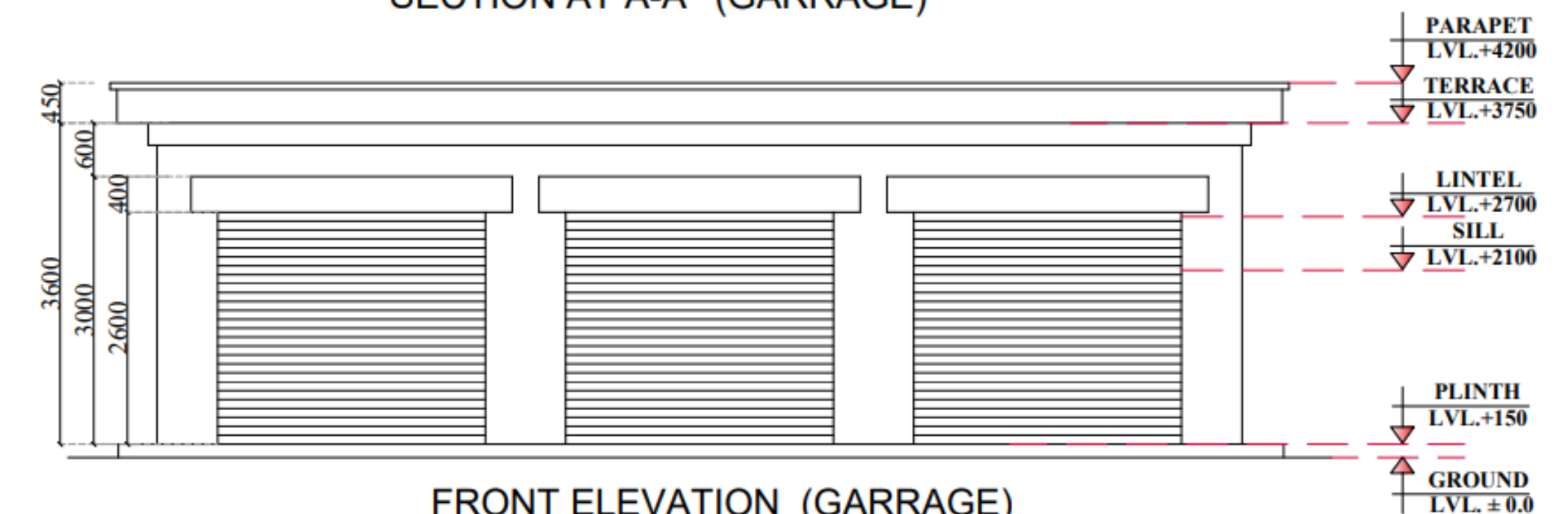
GARRAGE



GARRAGE 95.6 SQM.

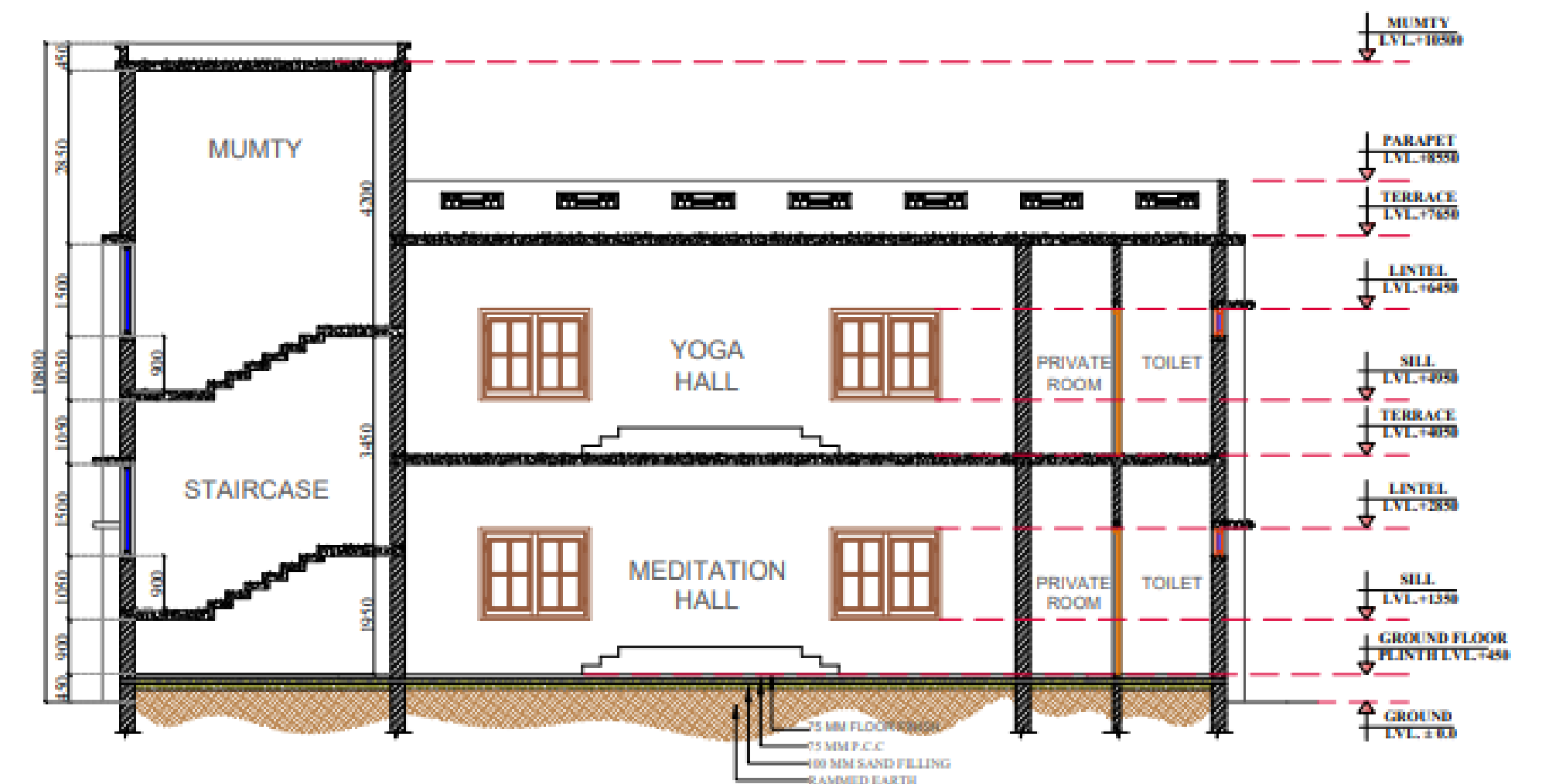
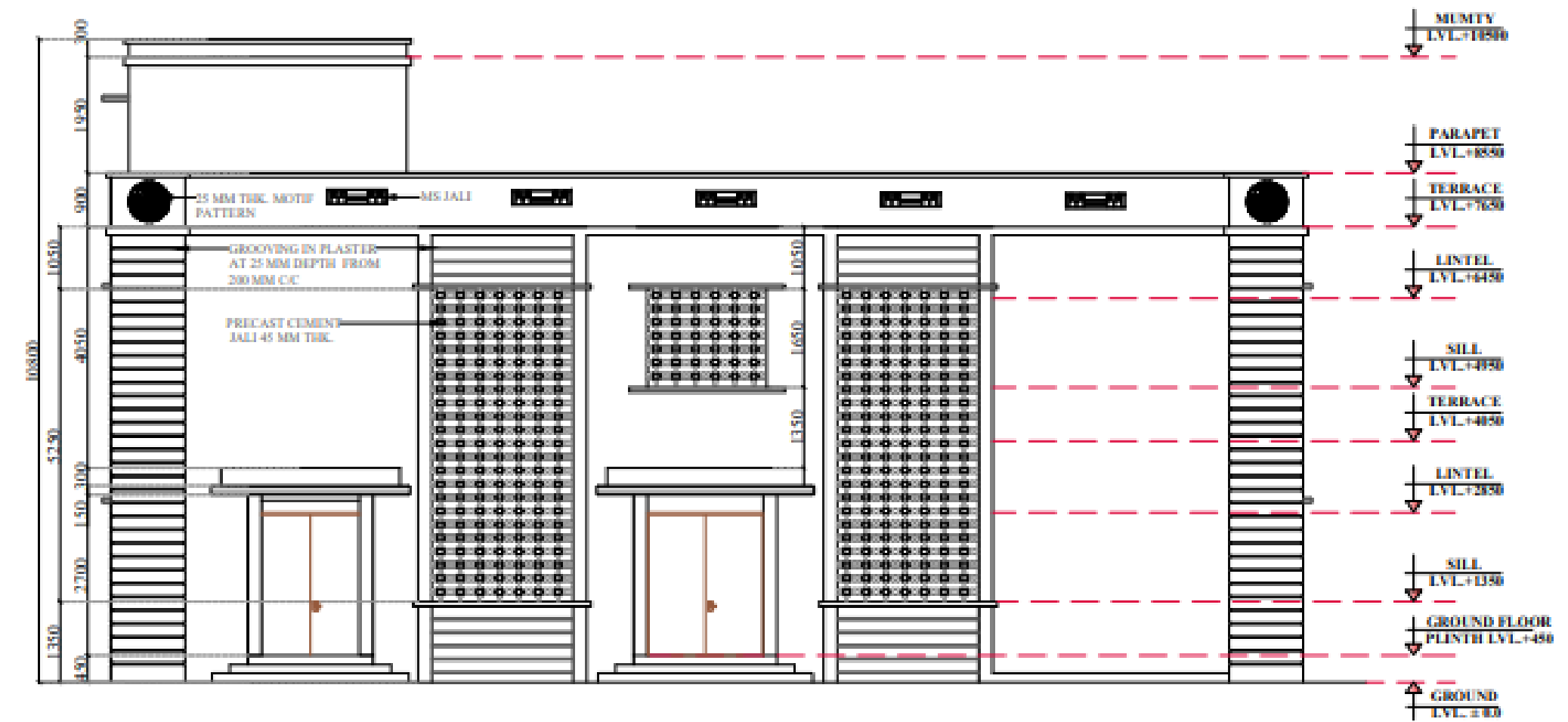
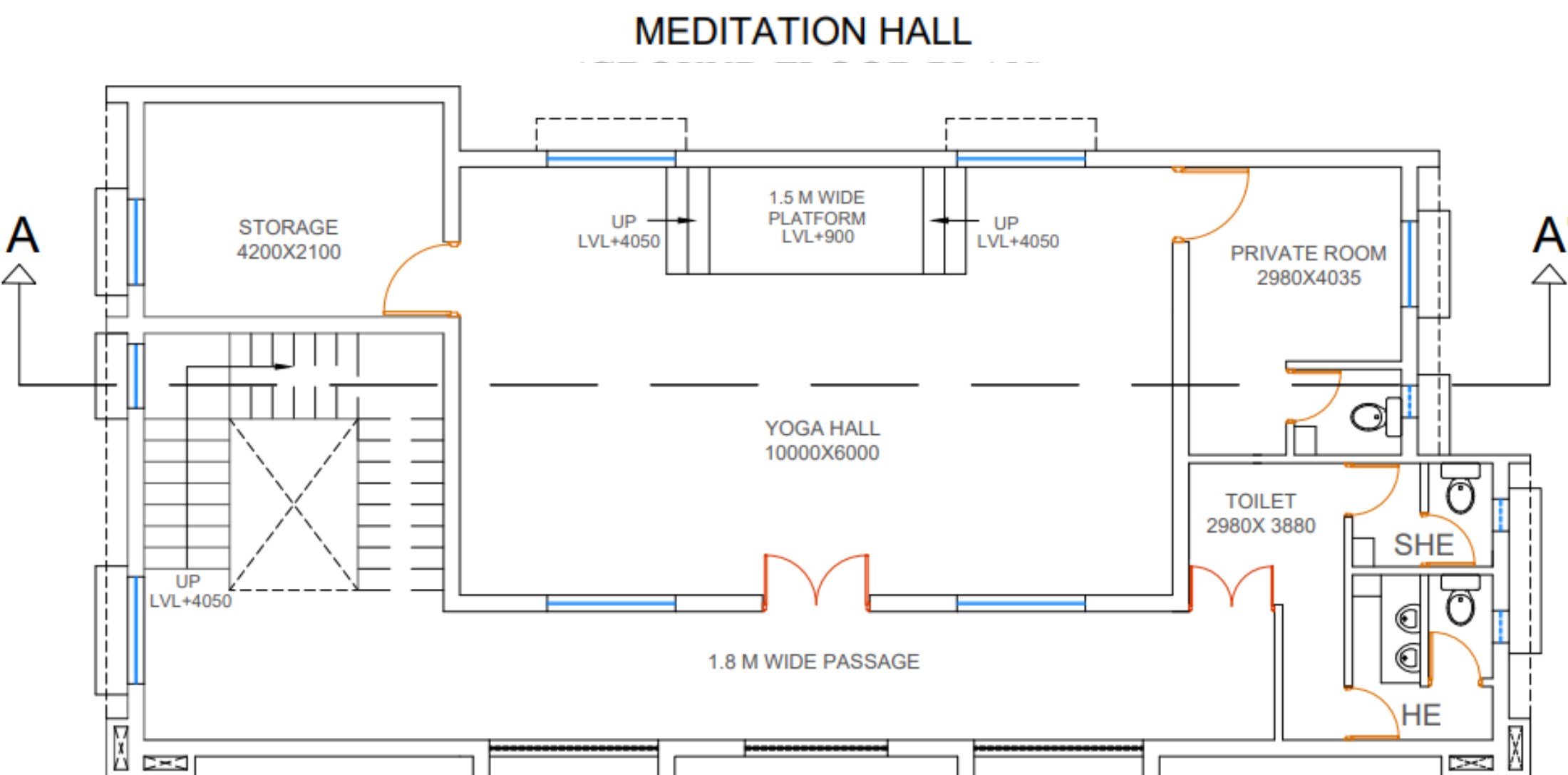
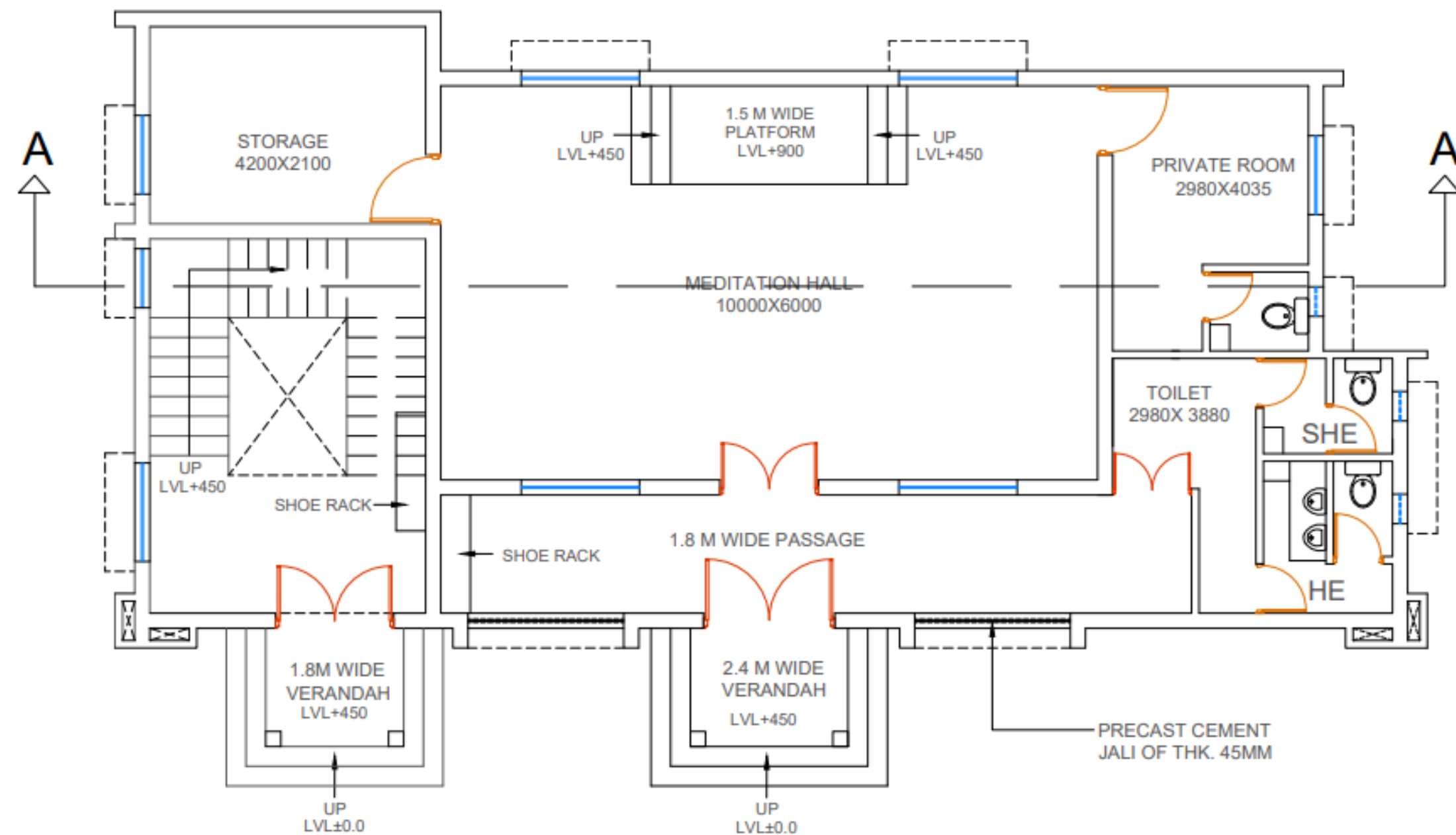


SECTION AT A-A' (GARRAGE)

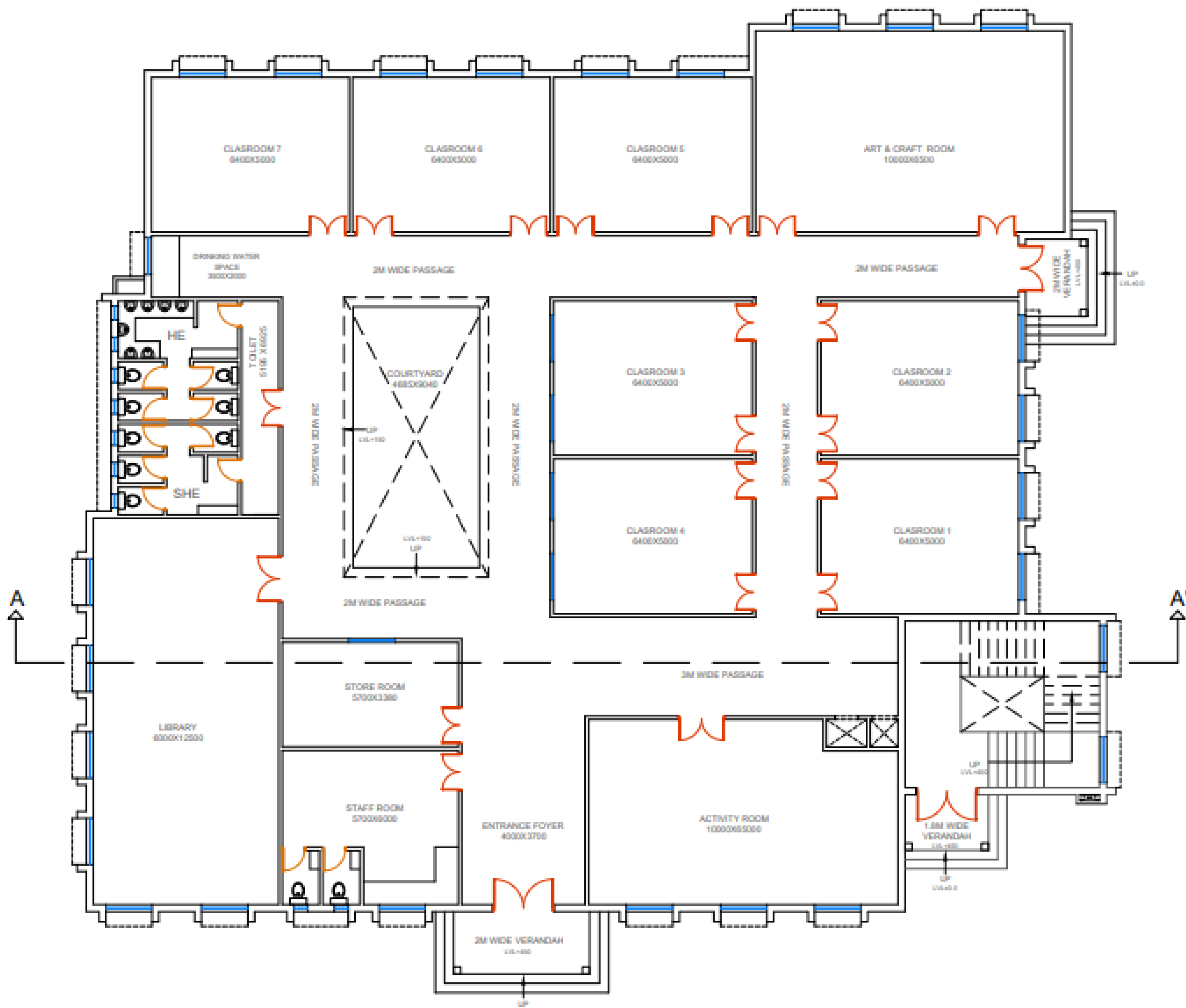


FRONT ELEVATION (GARRAGE)

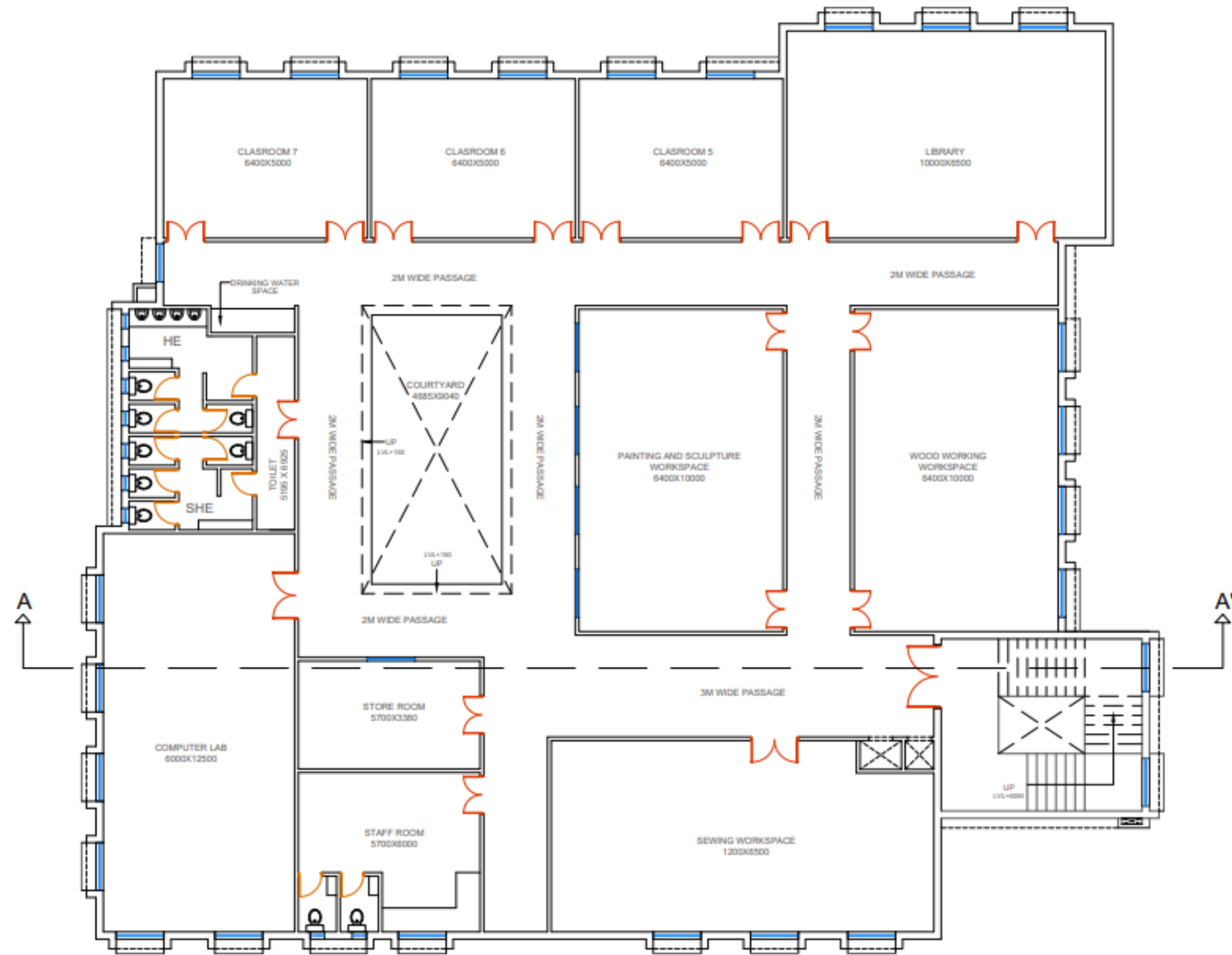
MEDITATION AND YOGA HALL



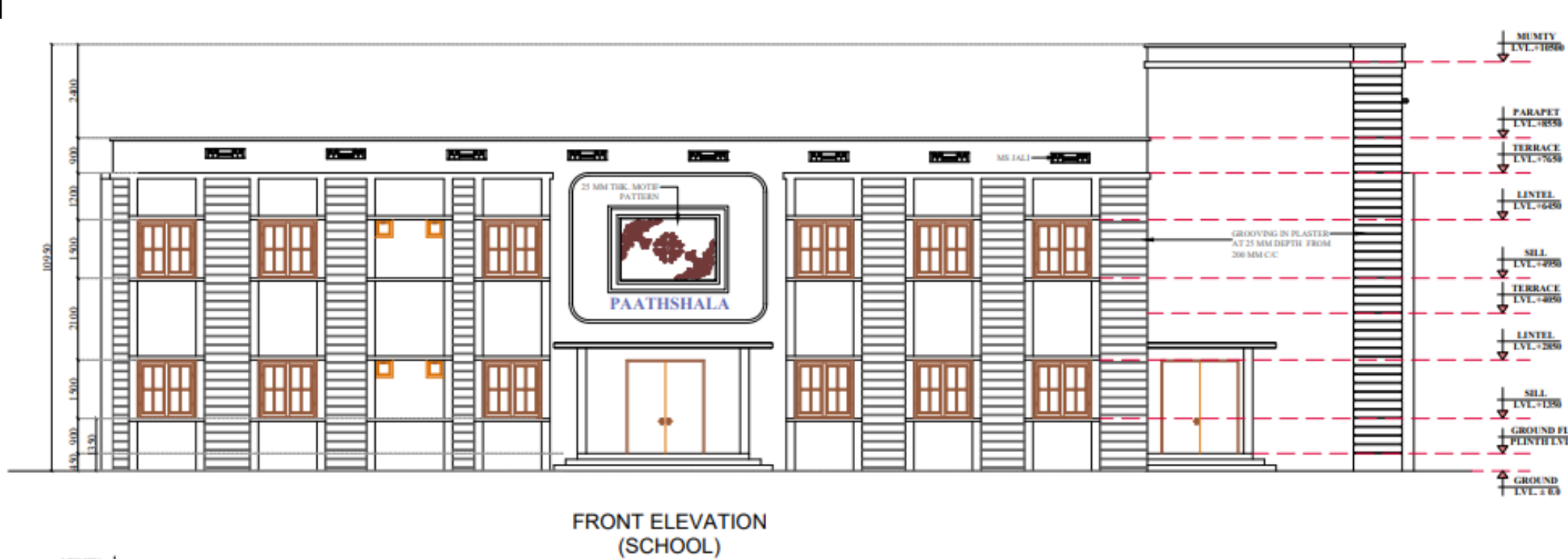
PRIMARY SCHOOL



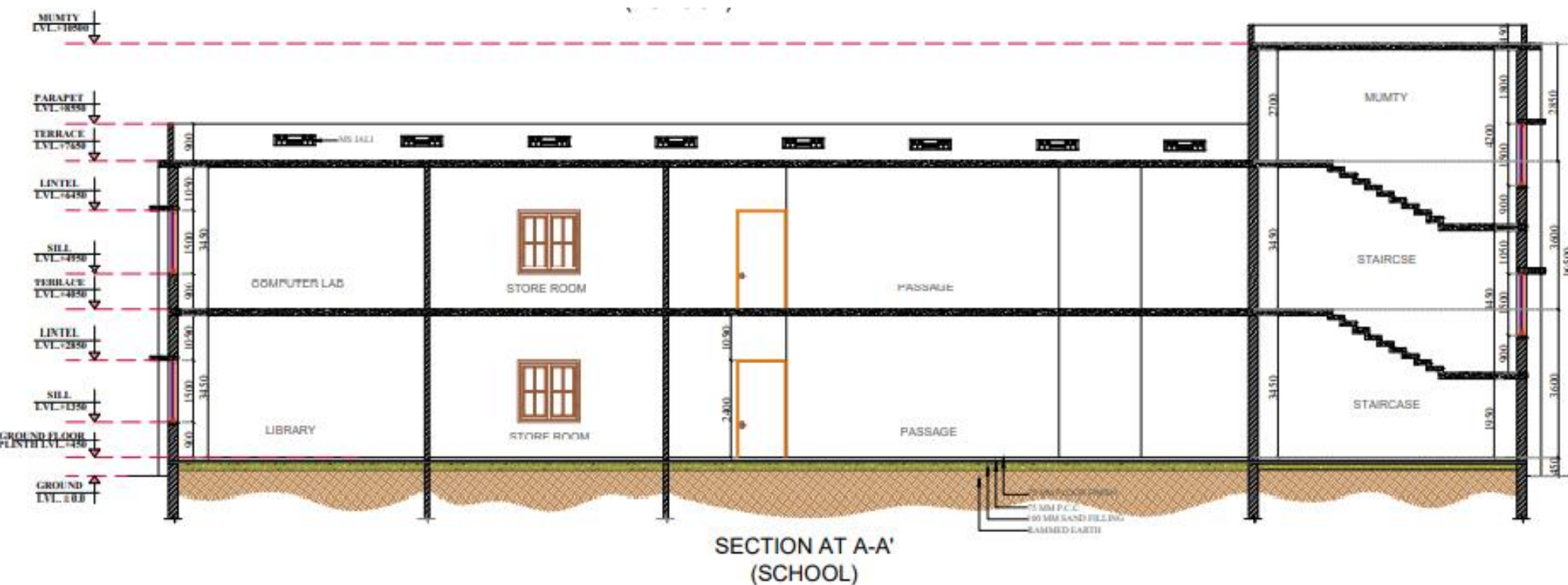
PRIMARY SCHOOL , GRROUND FLOOR PLAN
(FOR STUDENTS)
833 SQM.

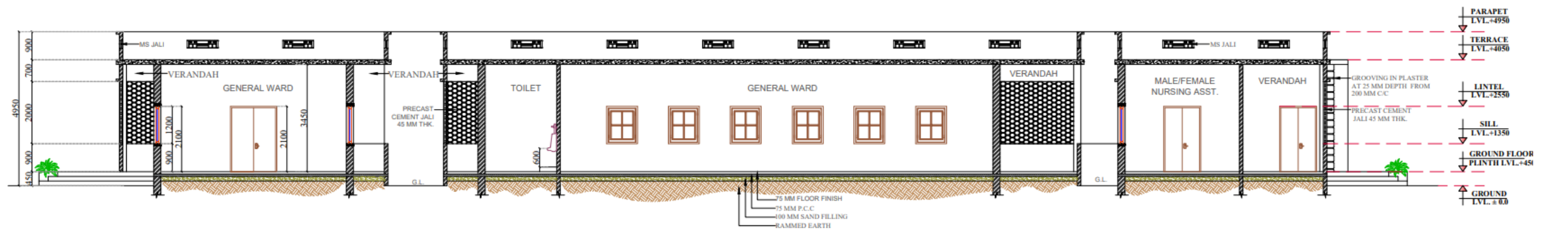
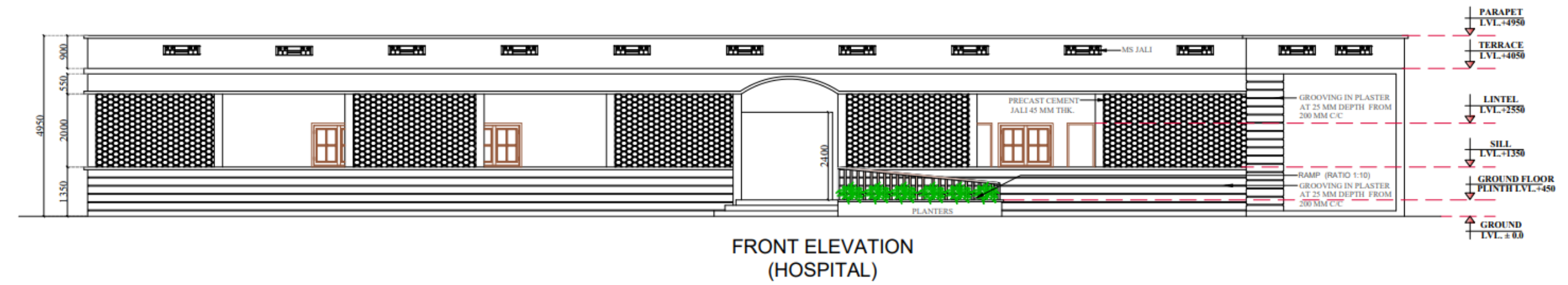


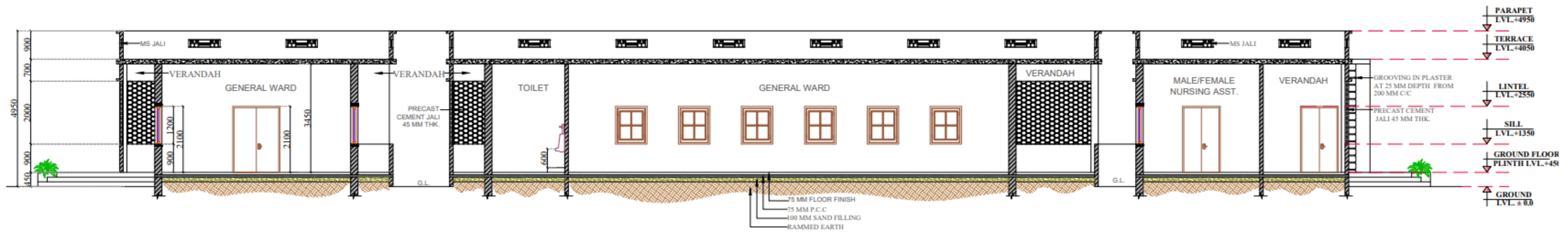
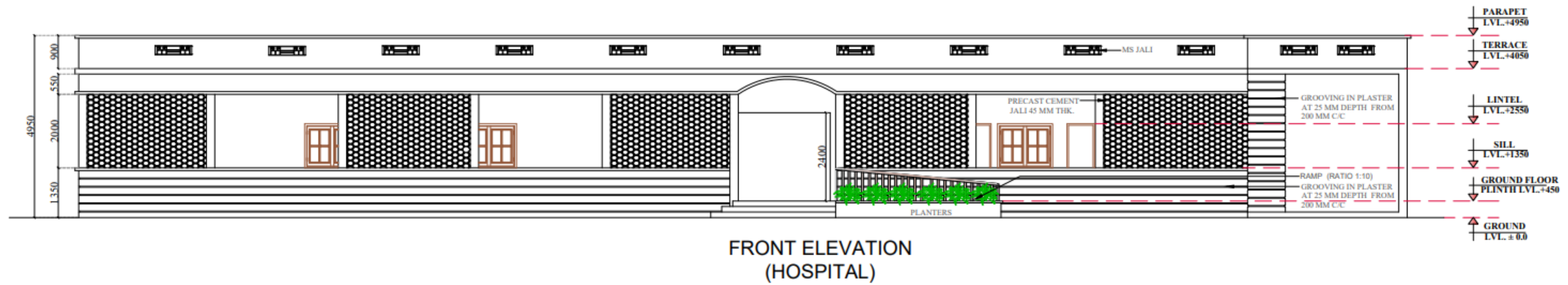
PRISONER'S SCHOOL,
FIRST FLOOR PLAN
833 SQM.

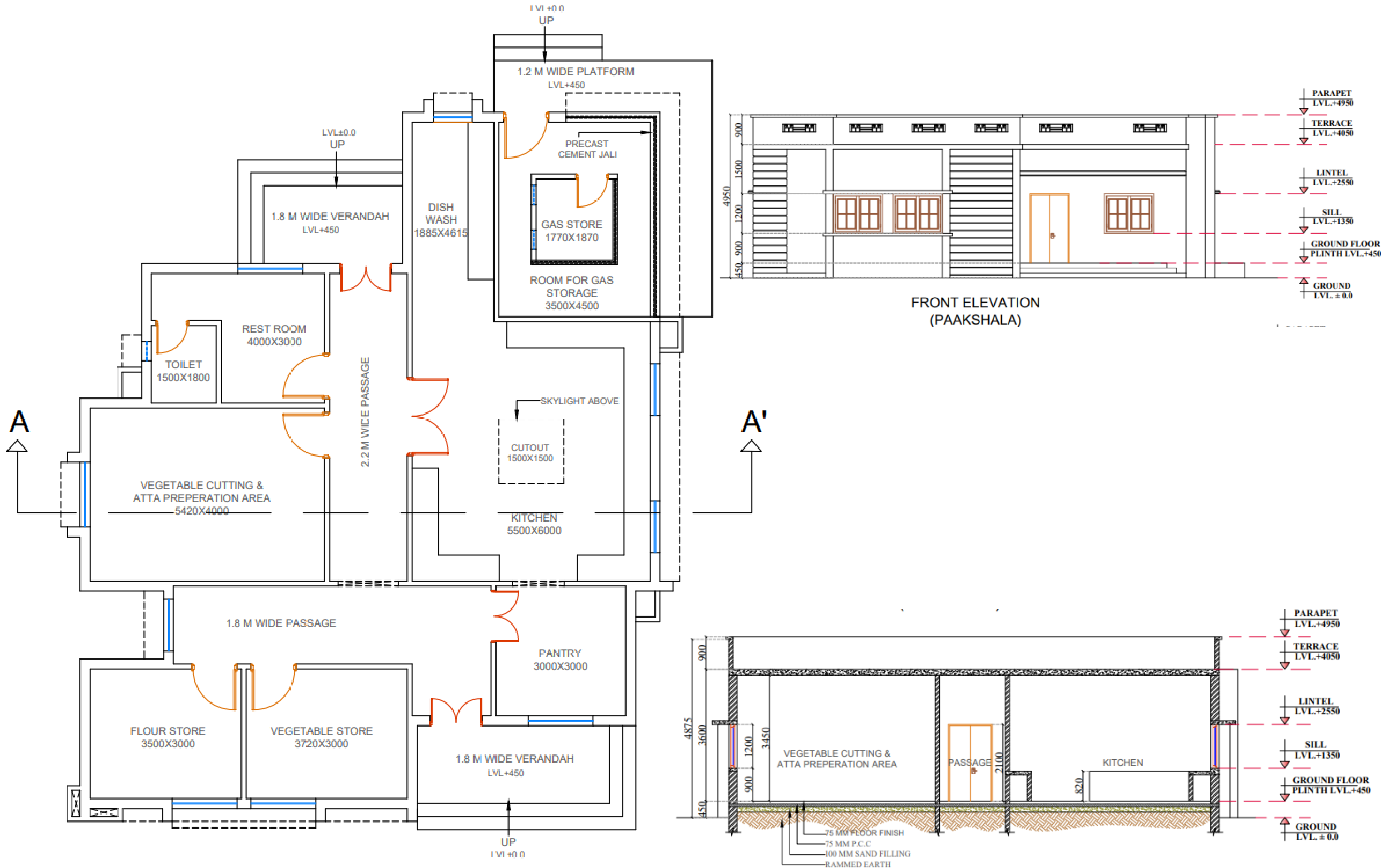


FRONT ELEVATION
(SCHOOL)

SECTION AT A-A
(SCHOOL)



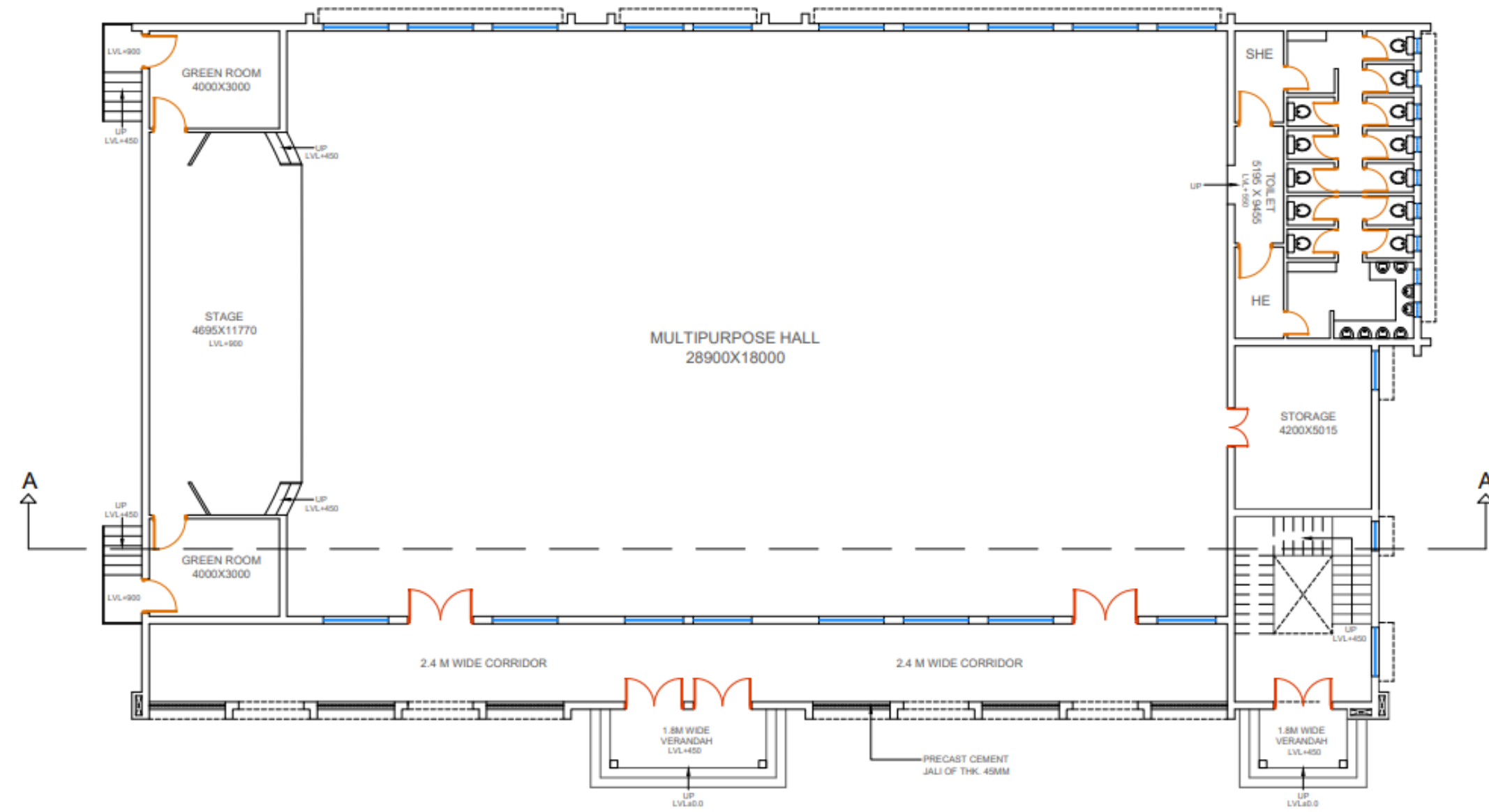




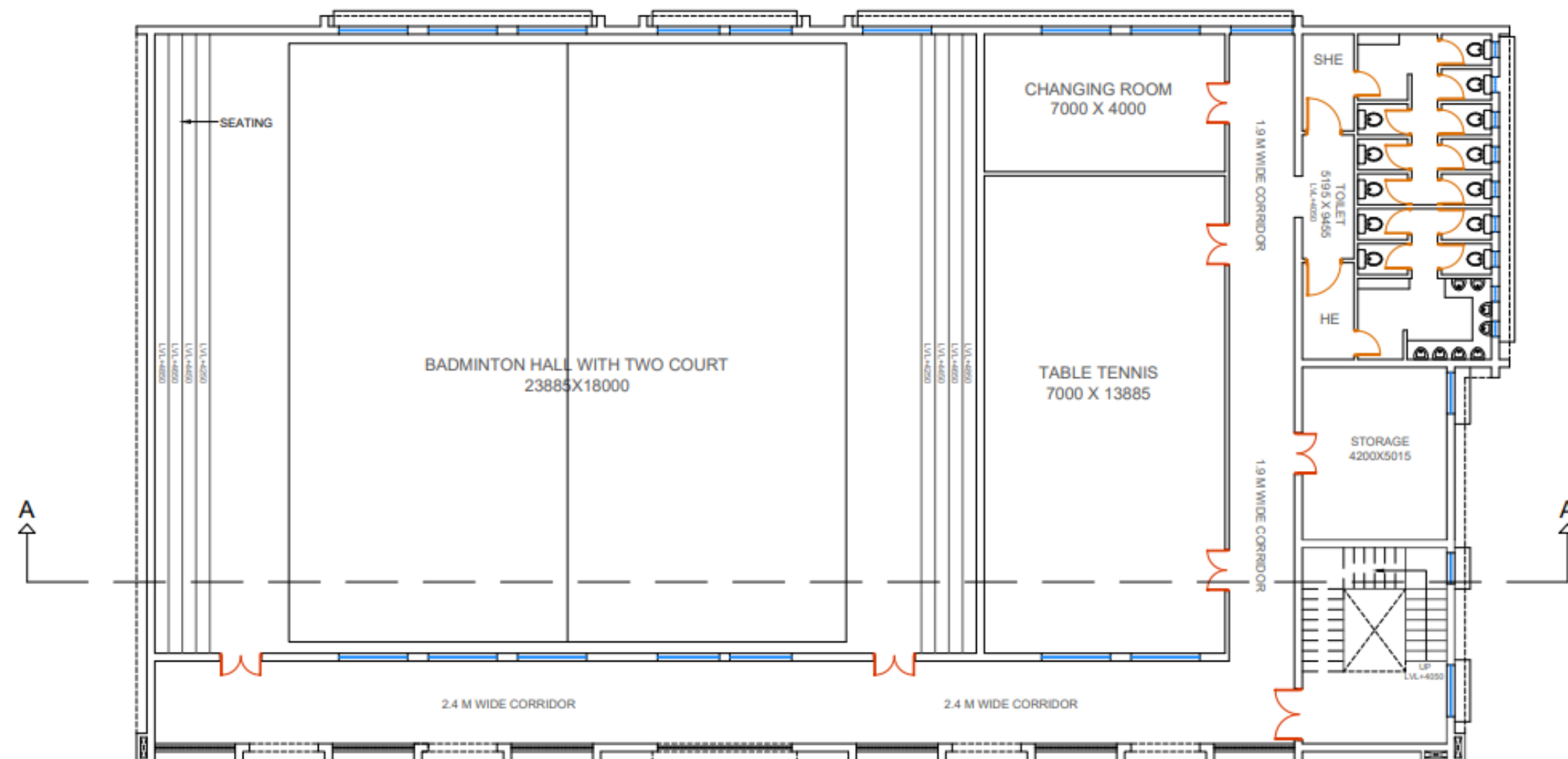
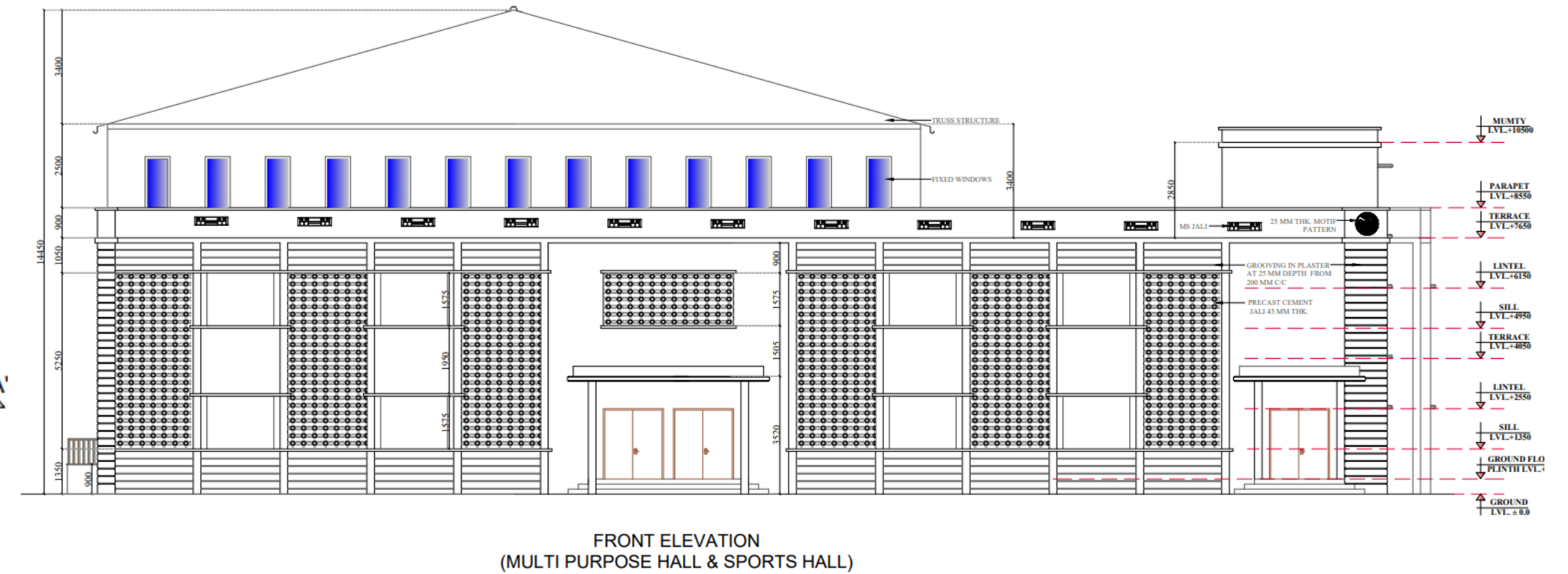
PAKSALA 170 SQM.

SECTION AT A-A' (KITCHEN)

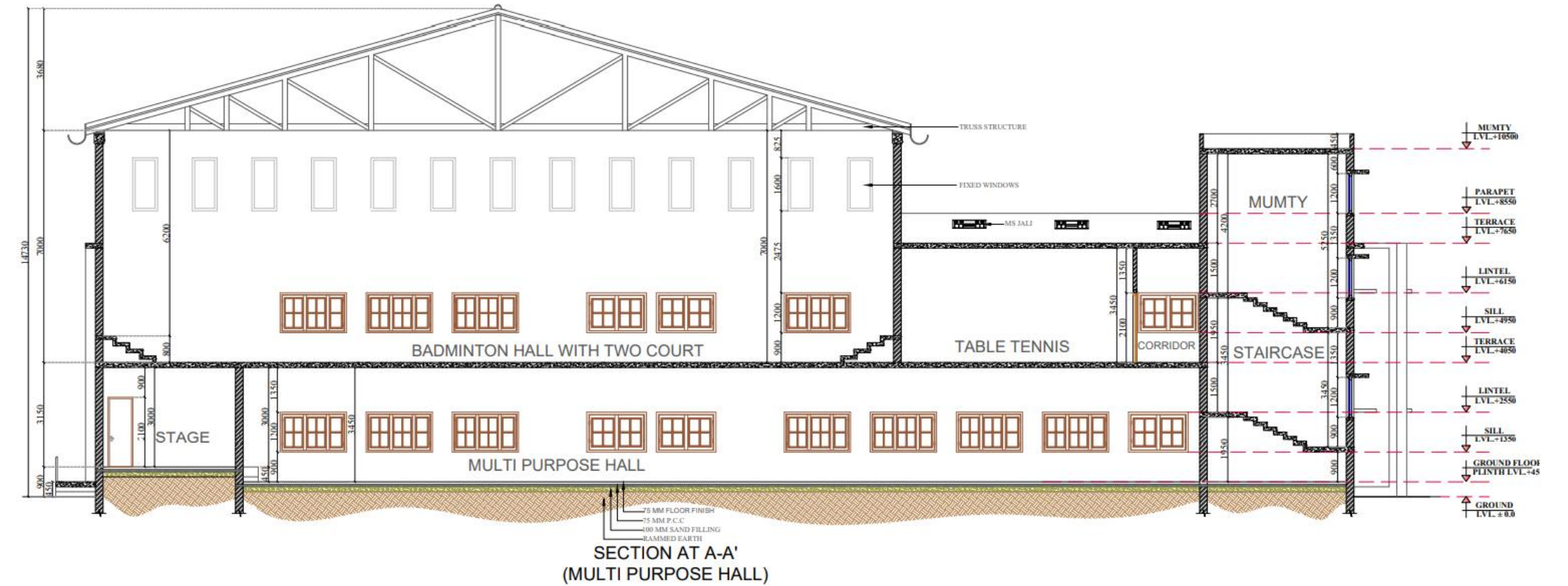
MULTI PURPOSE HALL AND SPORTS HALL

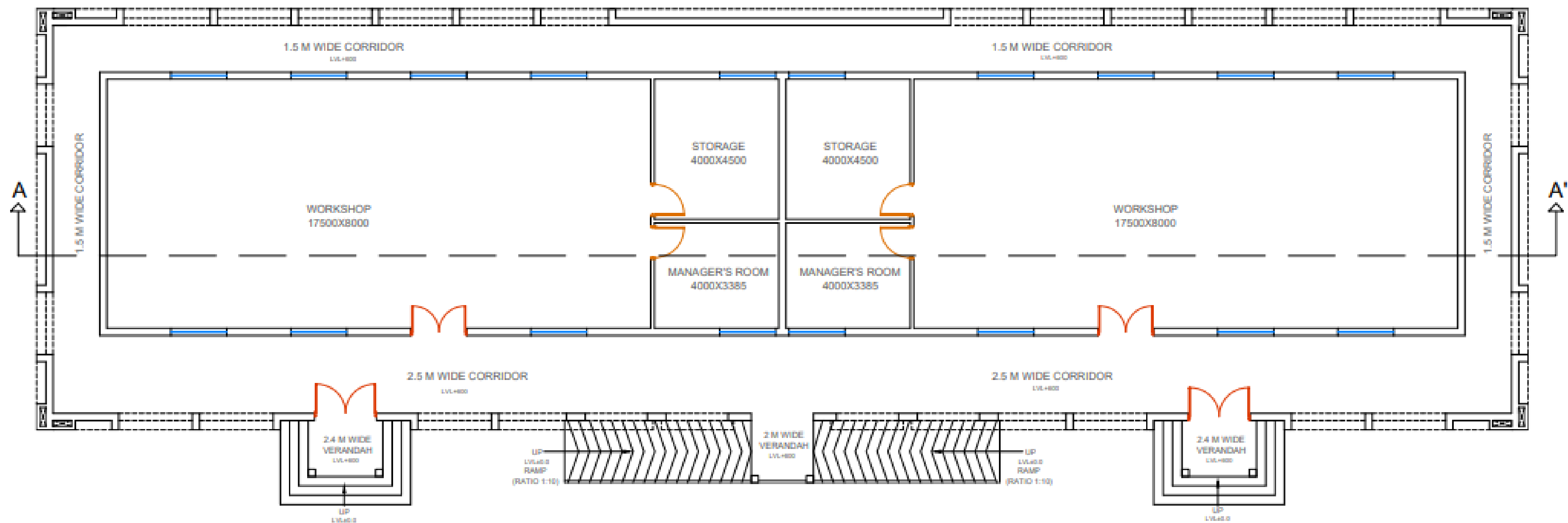


MULTIPURPOSE HALL (GROUND FLOOR PLAN)
814.6 SQM.

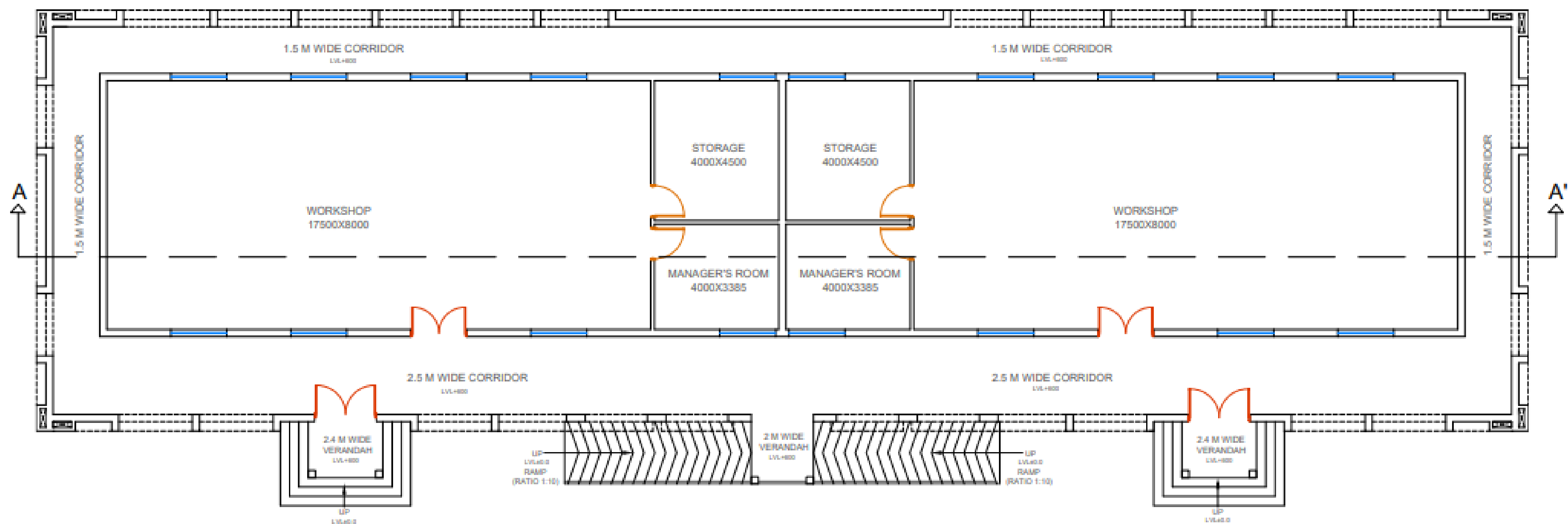


SPORTS HALL (FIRST FLOOR PLAN)
814.6 SQM.

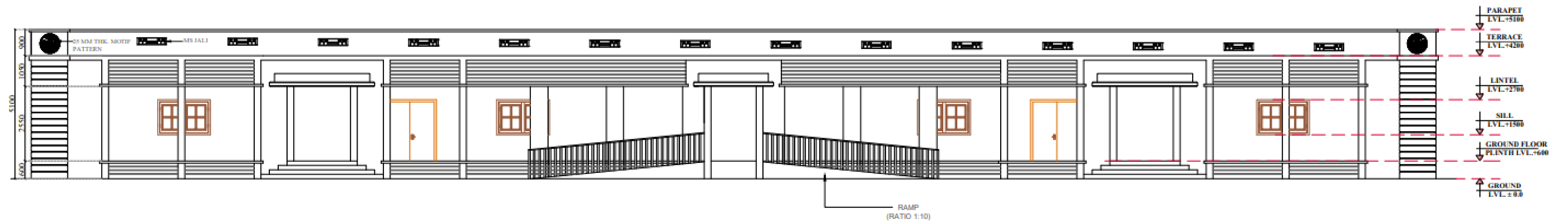




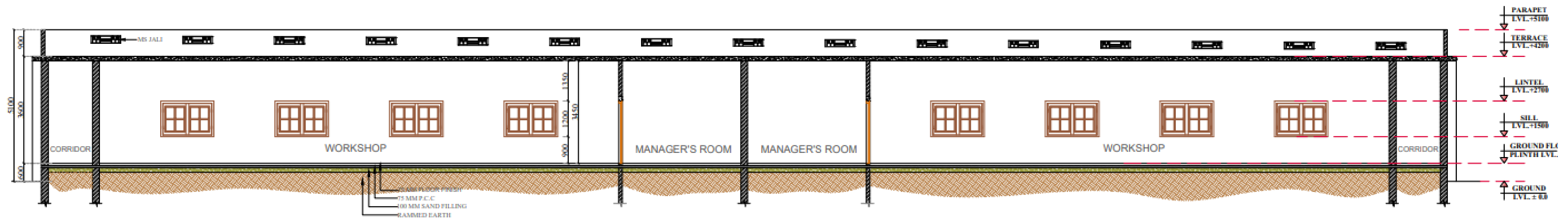
WORKSHOP (BLOCK-A)
584 SQM.



WORKSHOP (BLOCK-B)
584 SQM.

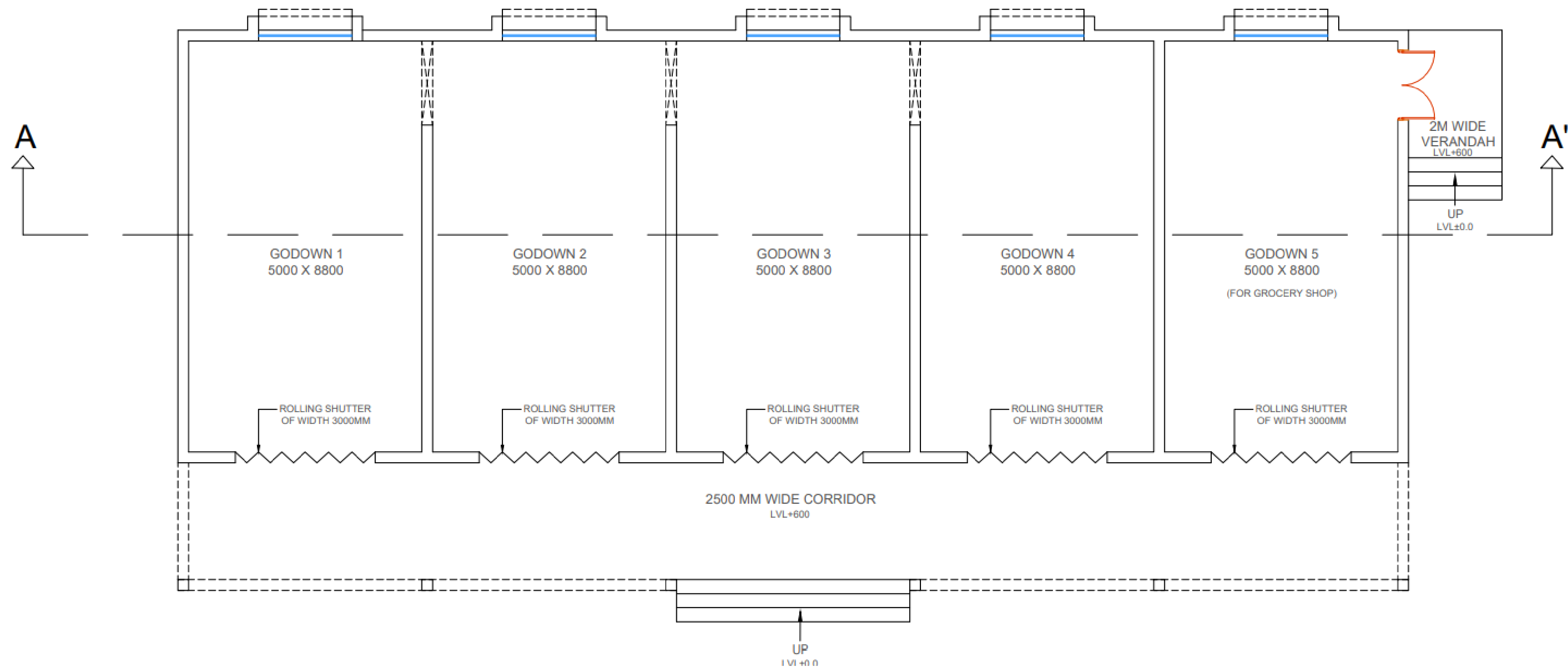


FRONT ELEVATION (WORKSHOP)

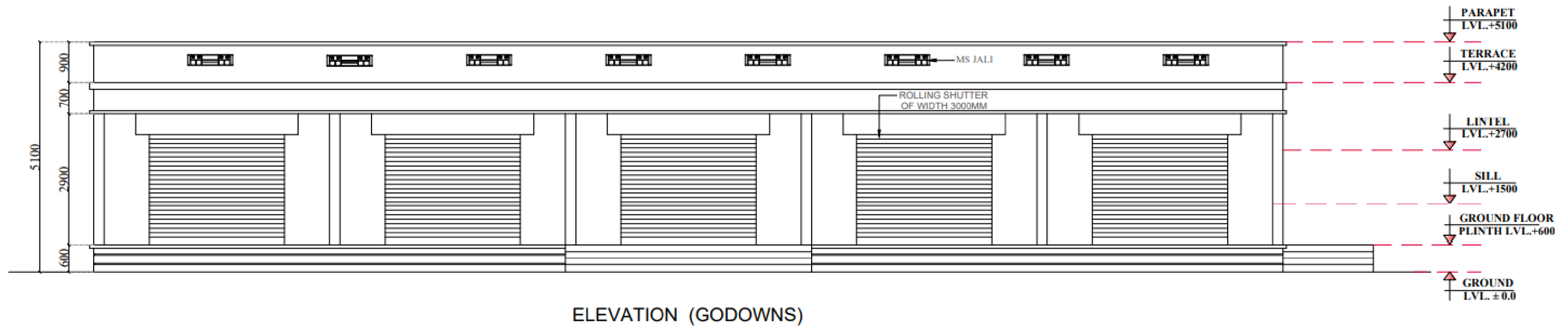
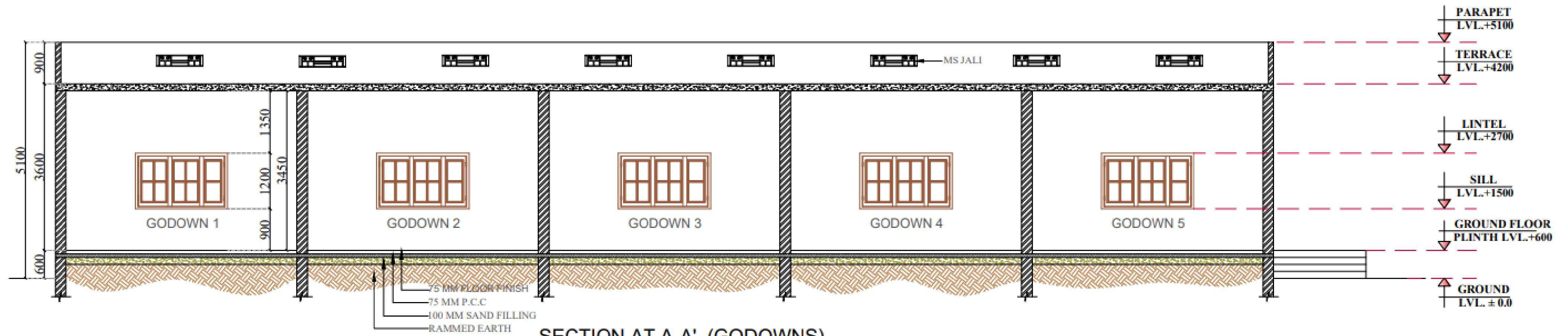


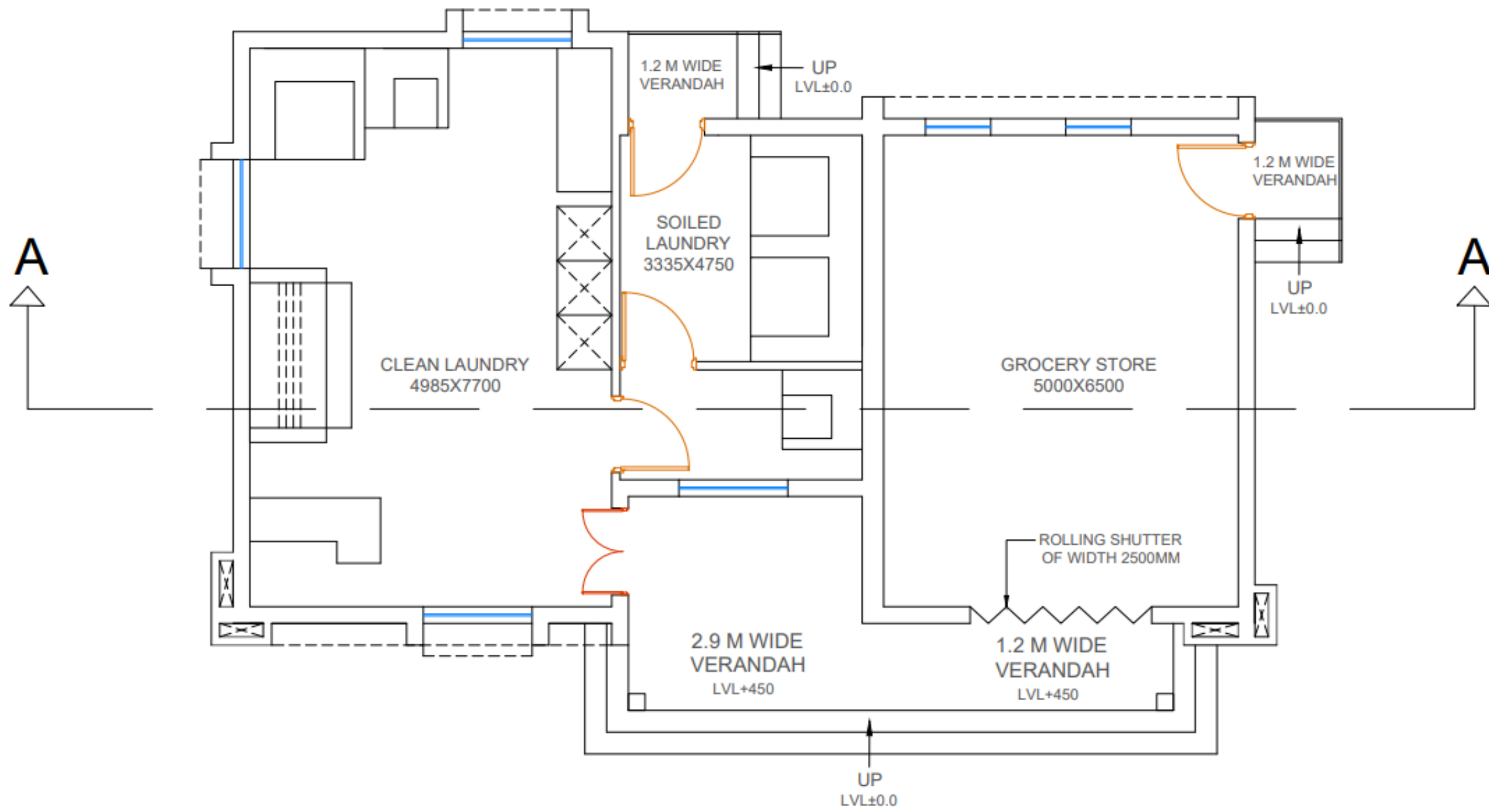
SECTION AT A-A'(WORKSHOP)

GODOWNS



GODOWN 305 SQM.

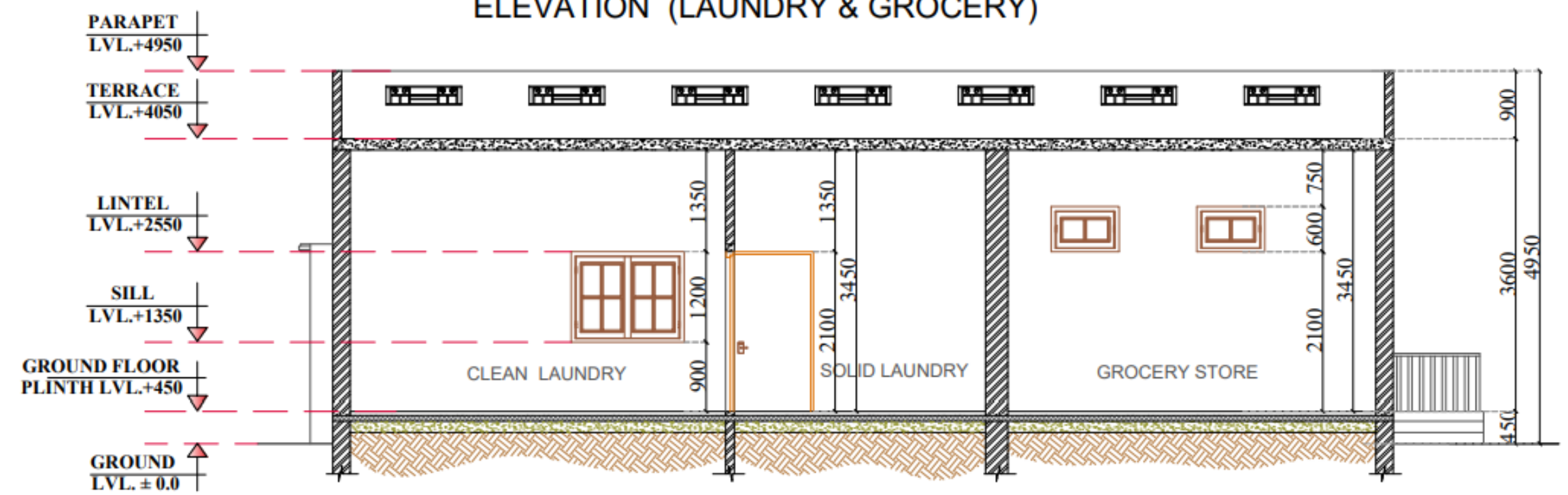




LAUNDRY & GROCERY SHOP
98.8 SQM

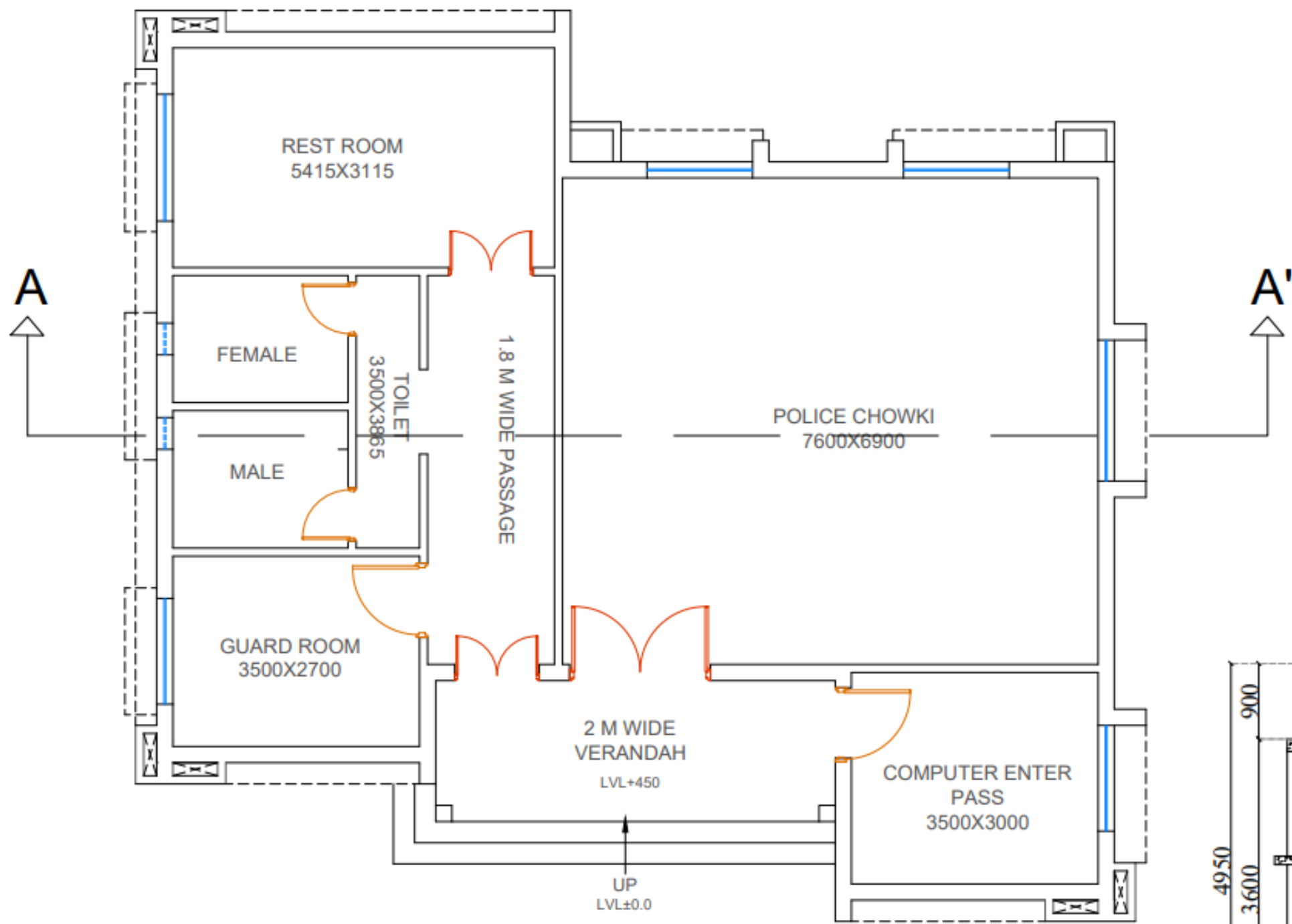


ELEVATION (LAUNDRY & GROCERY)

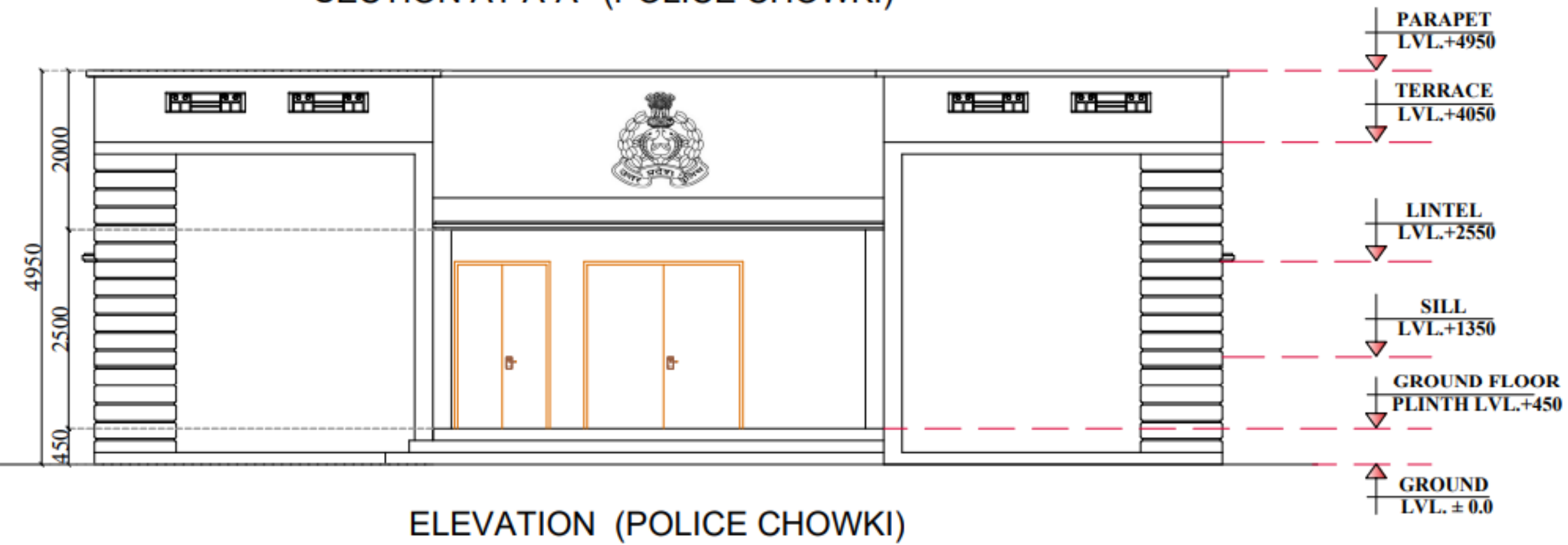
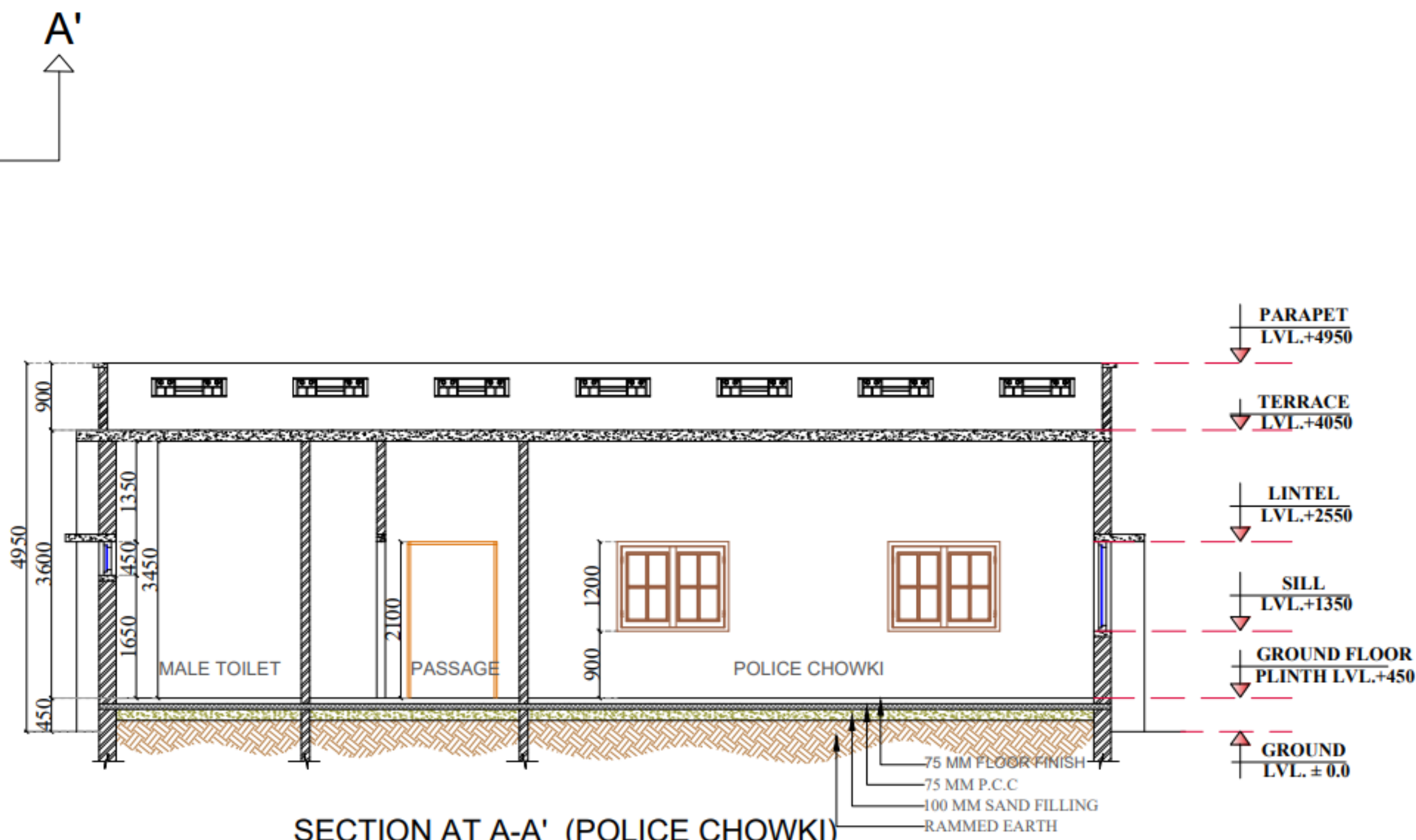


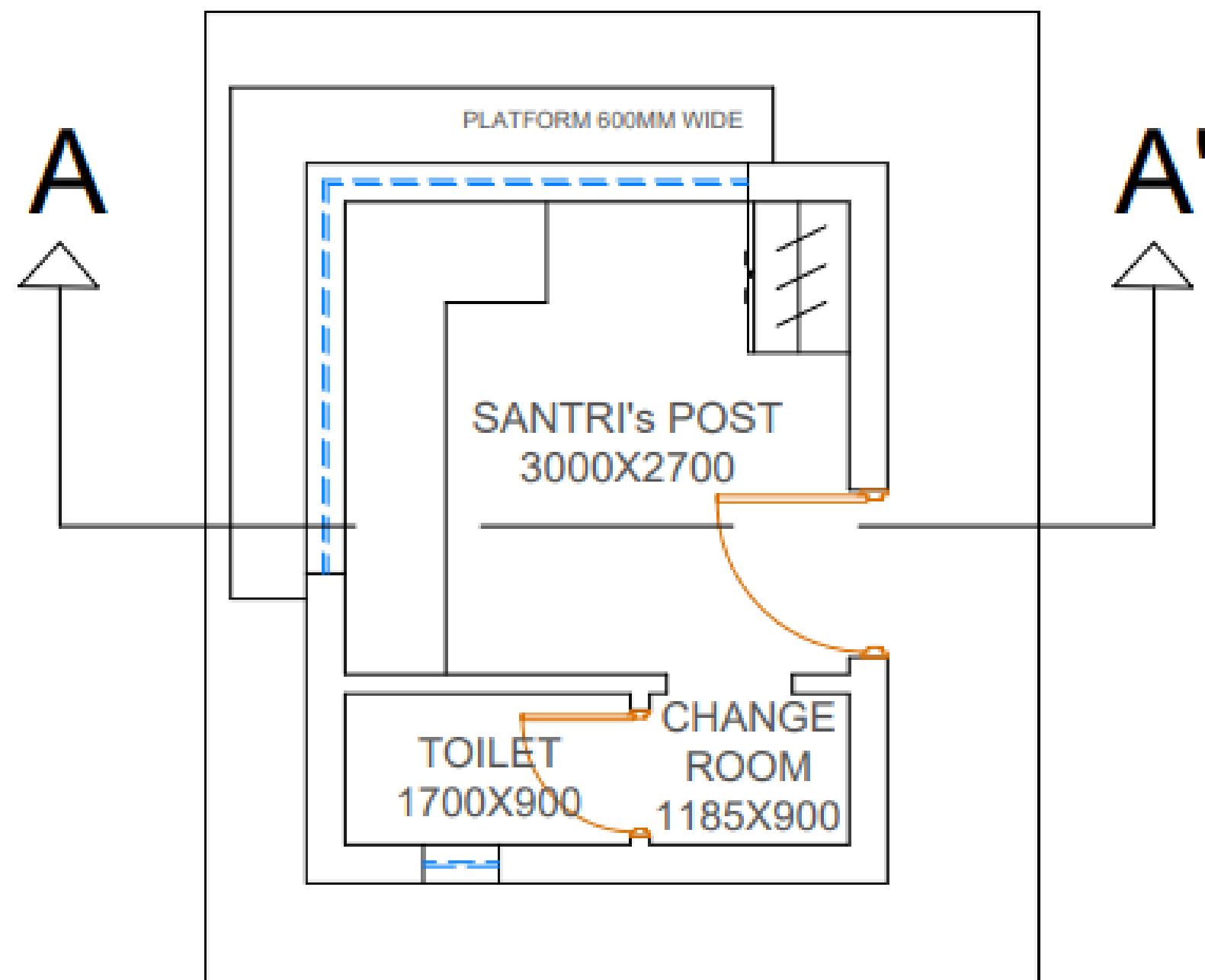
SECTION AT A-A' (LAUNDRY & GROCERY)

POLICE CHOWKI

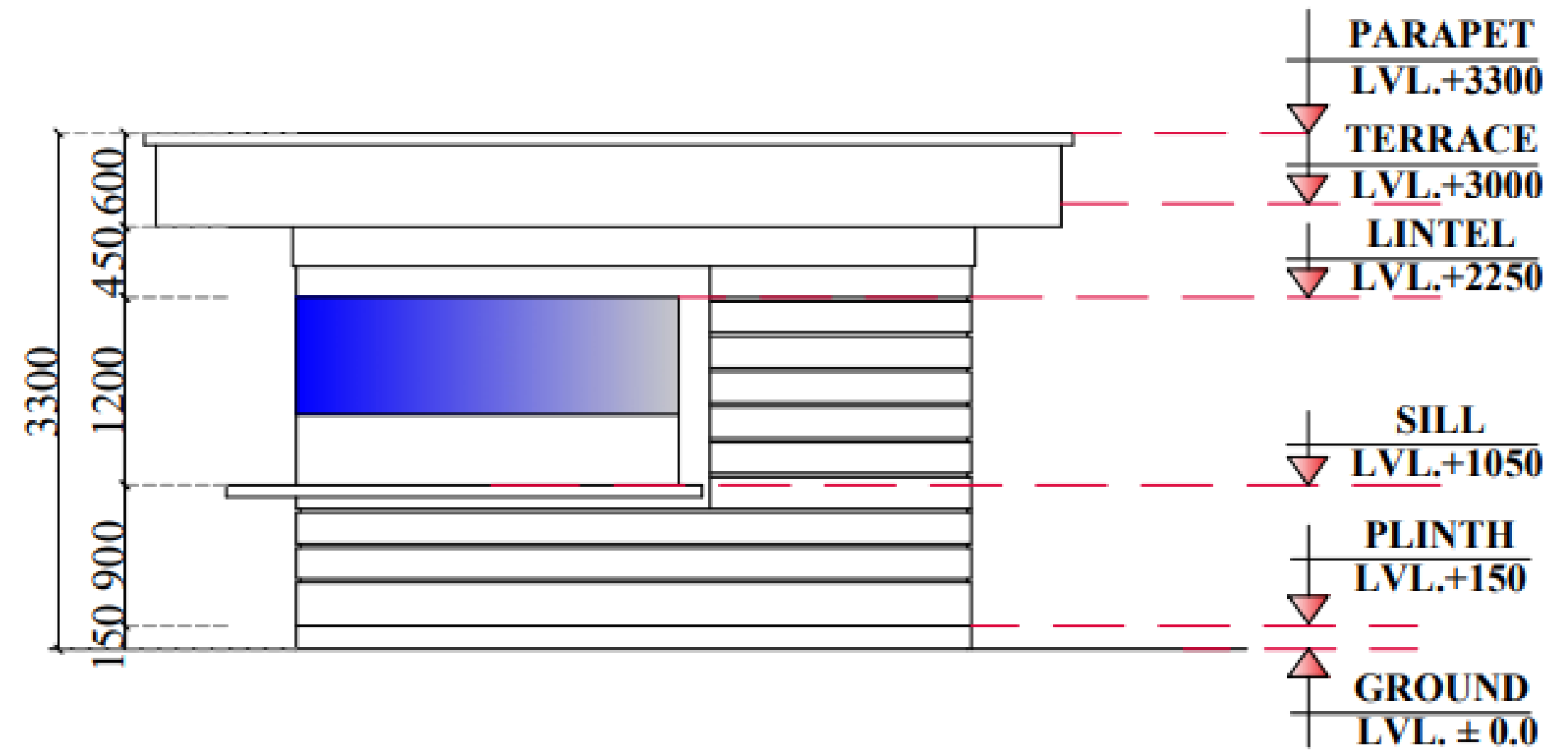


POLICE CHOWKI 127 SQM.

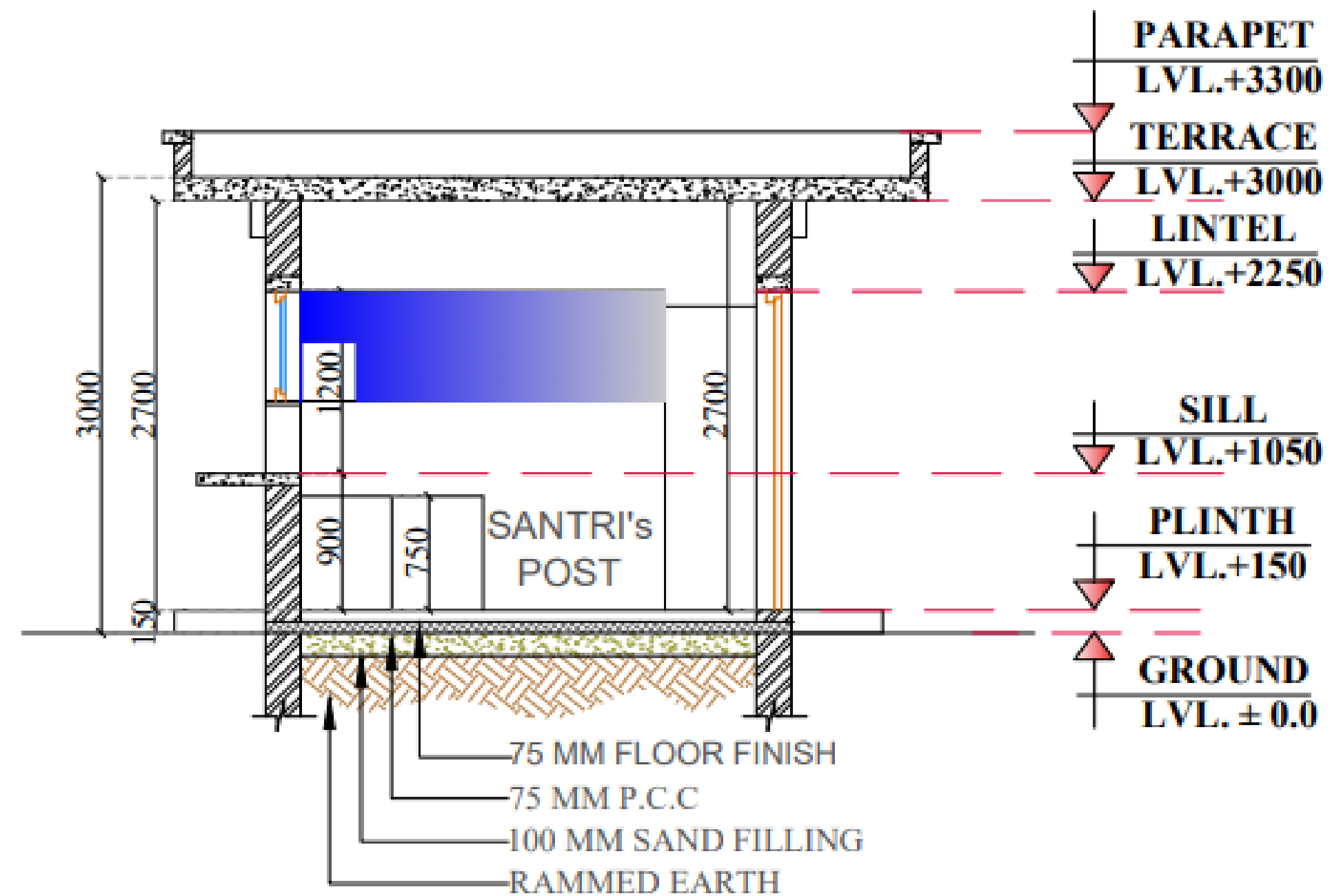




PLAN SANTRI'S POST
14SQM



REAR ELEVATION (SANTRI'S POST)



SECTION AT A-A' (SANTRI'S POST)